GSM TELEPHONE

GT-B5310

SERVICE Manual

GSM TELEPHONE

CONTENTS

1. Safety Precautions
2. Specification
3. Product Function
4. Array course control
5. Exploded View and Parts list
6. MAIN Electrical Parts List
7. Block Diagrams
8. PCB Diagrams
9. Chart of Troubleshooting
10. Reference data
11. Disassembly and Assembly Instructions

SAMSUNG ELECTRONICS

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2009. 11. Rev.1.0

2. Specification

2-1. GSM General Specification

	EGSM 850 Phase 2	EGSM 900 Phase 2	DCS1800	PCS1900	WCDMA
Freq. Band[MHz] Uplink/Downlink	824~849 869~894	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920~1980 2110~2170
ARFCN range	128~251	0~124 & 975~1023	512~885	512~810	10562~10838
Tx/Rx spacing	45 MHz	45 MHz	95 MHz	80MHz	190MHz
Mod. Bit rate/ Bit Period	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us	270.833 Kbps 3.692 us	3.84Mcps/s
Time Slot Period/ Frame Period	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms	576.9 us 4.615 ms	10ms
Modulation	0.3 GMSK	0.3 GMSK	0.3 GMSK	0.3 GMSK	Up Link:2BPSK Down Link:QPSK
MS Power	33 dBm~5 dBm	33 dBm~5 dBm	30 dBm~0 dBm	30 dBm~0 dBm	MAX:24(+1.-3) dBm MIN:<-50dBm
Power Class	5 pcl ~ 19 pcl	5 pcl ~ 19 pcl	0 pcl ~ 15 pcl	0 pcl ~ 15 pcl	CLASS 3
Sensitivity	-102 dBm	-102 dBm	-100 dBm	-100 dBm	-106.7 dBm
TDMA Mux	8	8	8	8	-
Cell Radius	-	35 Km	2 Km	-	-

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2-2. GSM TX power class

TX Power control level	EGSM850
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3 dBm
18	7±3 dBm
19	5±3 dBm

TX Power control level	EGSM900
5	33±2 dBm
6	31±2 dBm
7	29±2 dBm
8	27±2 dBm
9	25±2 dBm
10	23±2 dBm
11	21±2 dBm
12	19±2 dBm
13	17±2 dBm
14	15±2 dBm
15	13±2 dBm
16	11±3 dBm
17	9±3 dBm
18	7±3 dBm
19	5±3 dBm

TX Power control level	DCS1800
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

TX Power control level	PCS1900
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

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3. Product Function

Main Function

- 3M CMOS Camera
- CIF CMOS Camera
- TFT LCD 240*320
- Full Touch
- FM Radio
- Music Player
- Google Application
- Bluetooth
- WLAN
- AGPS
- USB 2.0

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4. Array course control

4-1. Software Adjustments

Test Jig (GH99-36900A)

Test Cable (GH39-01290A)

RF Test Cable (GH39-00985A)

Adapter (GH44-38251A)

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4-2. Software Downloading

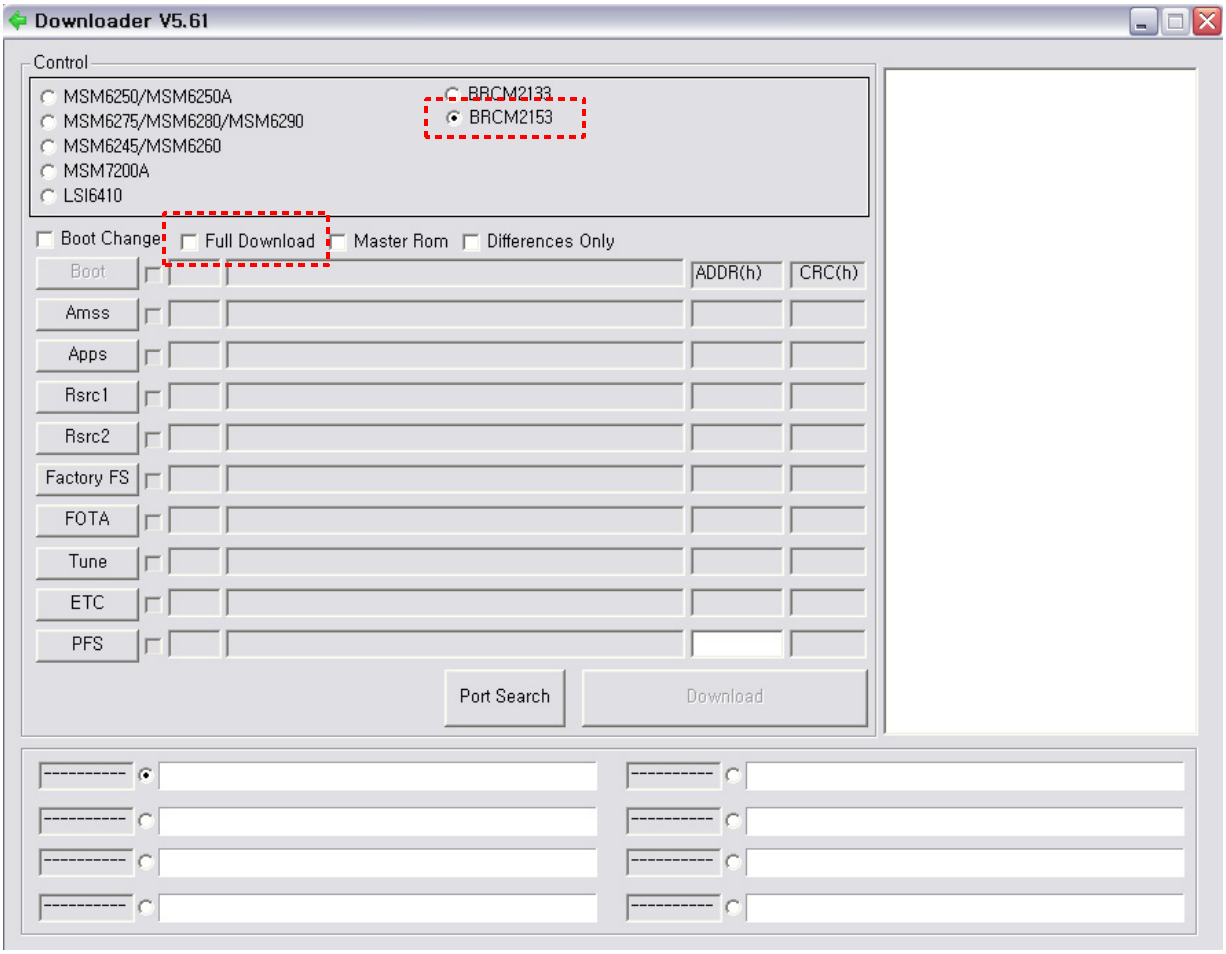
4-2-1. Pre-requsite for Download

- Downloader Program(**Multiloader V5.61.exe**)
- GT-B5310U Mobile Phone
- Micro USB Data Link Cable
- Binary files

4-2-2. S/W Download Process

■ Load the binary download program by executing the "**Multiloader V5.61.exe**"

1. Execute the download SW, Multiloader.exe.
2. Boot the B5310U by pressing 'Volume Key' + 'Camera Key' + 'Power ON Key' \ at the same time.
   - if you do properly, you can see the 'DOWMLOAD' in the middle of the screen.
3. Connet the Micro USB data cable to the B5310U.
4. Choose BRCM2153 and check 'Full Download'.



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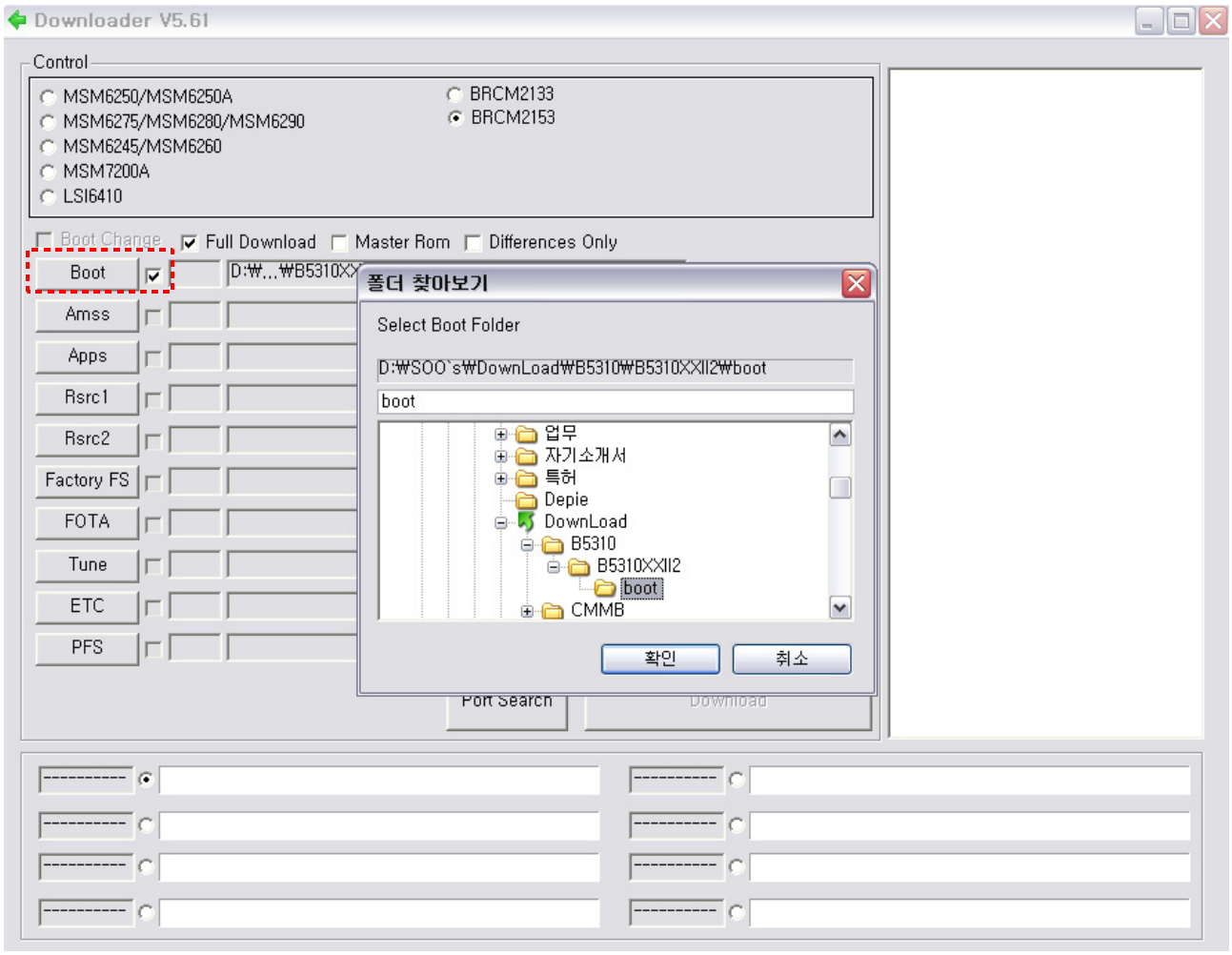
5. Click the 'Boot', then the dialogue box is opened. Select the wanted directory, and press 'OK'.



6. And the others('Amss', 'Rsrc1', 'Rsrc2', 'FactoryFS', 'FOTA', and 'ETC') are activated.
   - Click 'AMSS', 'Rsrc1', 'Rsrc2', and 'FactoryFS' each, and select wanted files.

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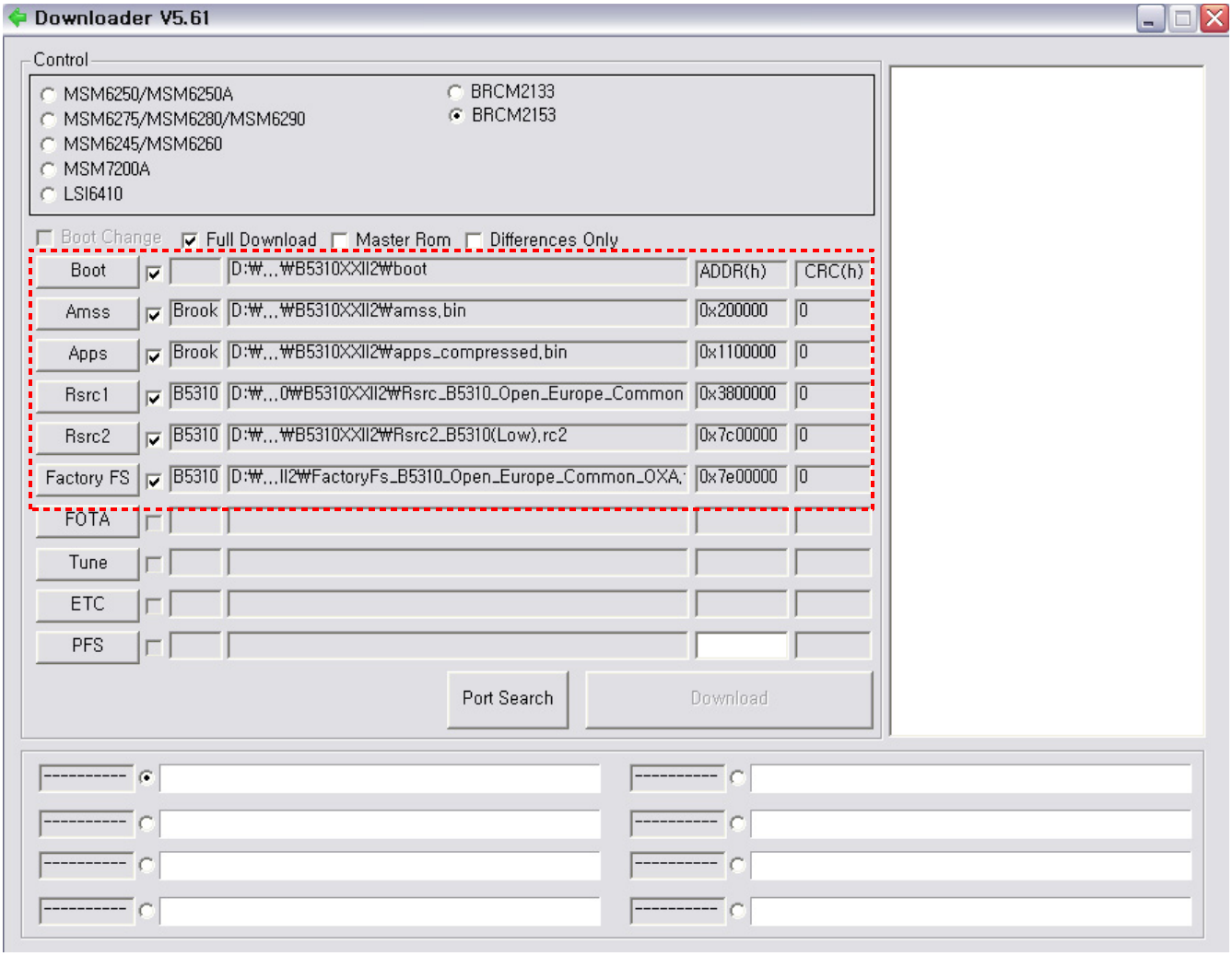

7. Select 'Port Search', then 'Port' is activated.

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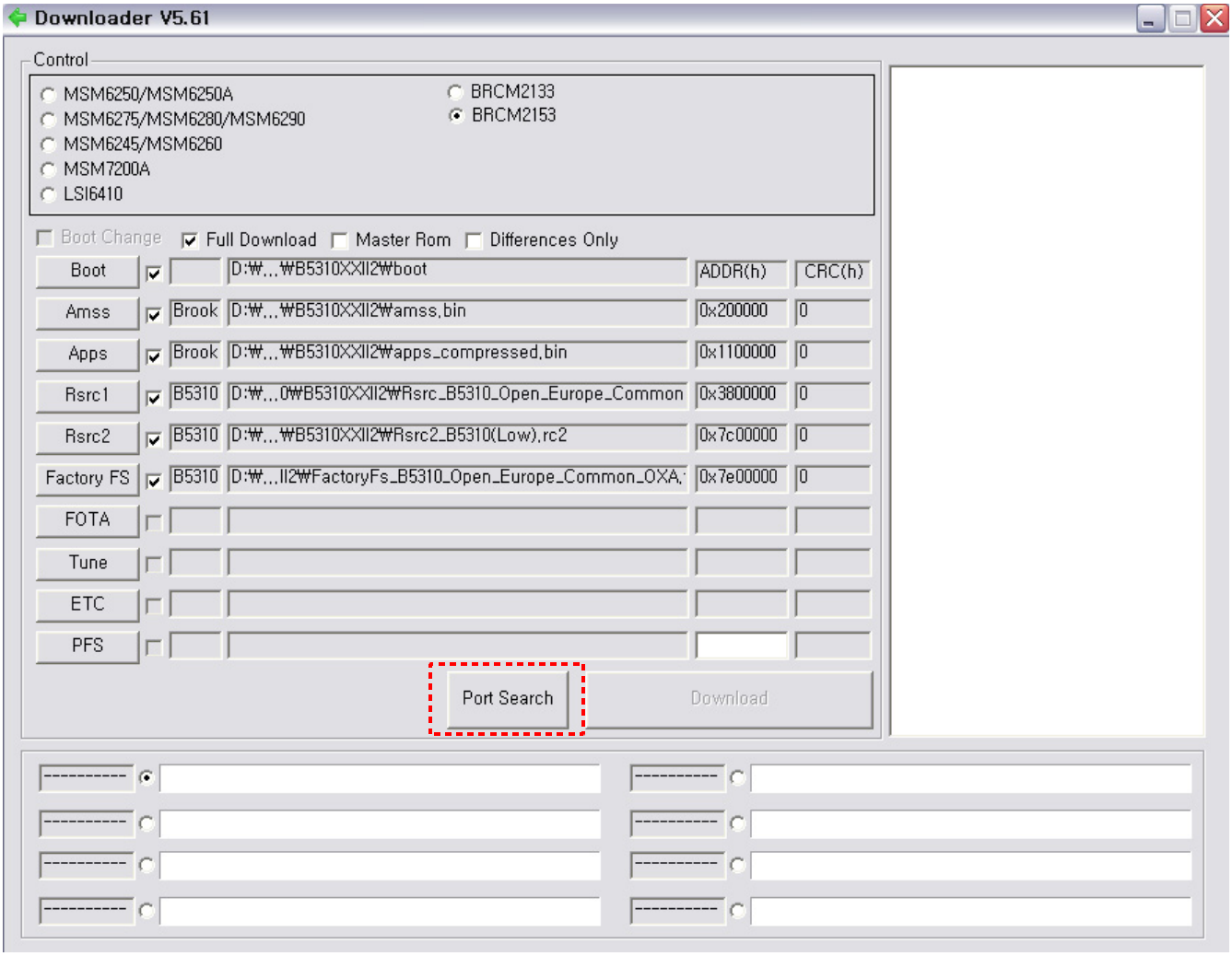

13. Click 'Download', then downloading is executed successively.If the download is completed, S/W downloading is finished. (Download time : about 5 minutes)

14. Recommedations

Don't touch the mobile phone while downloading to prevent disconnecting.
Disconnection while downloading is critical to phone condition.
Main PCB may be useless by disconnection while downloading.

If all files are downloaded, it is recommended to do full reset.

Full reset : *2767*3855#

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10. Reference data

Reference Abbreviation

- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** **:** European Standard
- **ES** **:** Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** **:** Transport Stream

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1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
  Take specially care of tuning or test,
  because specipicty of cellular phone is sensitive for surrounding interference(RF noise).

- Be careful to use a kind of magnetic object or tool,
  because performance of parts is damaged by the influence of manetic force.

- Surely use a standard screwdriver when you disassemble this product,
  otherwise screw will be worn away.

- Use a thicken twisted wire when you measure level.
  A thicken twisted wire has low resistance, therefore error of measurement is few.

- Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.

- Take specially care of soldering, because Land of PCB is small and weak in heat.

- Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembing charger.

- Don't use as you pleases after change other material than replacement registered on SEC System.
  Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

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1-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easilly by static electricity. Such parts are called by ESD(Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below. You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.
- Use earthed soldering steel when you connect or disconnect ESD.
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.
- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.
- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

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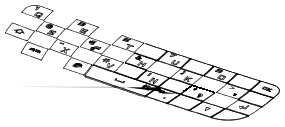
5. Exploded View and Parts List

5-1. Cellular phone Exploded View



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5-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QAN02		INTENNA-GT_B5310	GH42-02307A
QAR01		AUDIO-RECEIVER	3009-001416
QBA01		INNER BATTERY PACK-960MAH,BLK,UNI,MAIN	GH43-03216A
QBC00		ASSY COVER-BATT	GH98-15331A
QBC01		PMO COVER-CHANGEABLE BATT	GH72-57073A
QCA01		CAMERA MODULE-GT_B5310 3M	GH59-08391A
QCA02		ASSY CAMERA-GT_B5310 CIF	GH96-04134A
QCK01		PMO KEY-HOLD	GH72-55647A
QCR03		SCREW-MACHINE	6001-001811
QCR71		SCREW-MACHINE	6001-002095
QCR72		SCREW-MACHINE	6001-002051
QCR97		SCREW-MACHINE	6001-002262
QFL01		ASSY CASE-SLIDE LOWER	GH98-14228A
QFU01		ASSY CASE-SLIDE UPPER	GH98-14230A
QKP01		ASSY KEYPAD-QWERTY(RED/FRANCE BELGIUM)	GH98-15395A
QKP02		ASSY KEYPAD-SUB(BLACK/OPEN)	GH98-14233A
QLC01		ELA MODULE-LCD MODULE(GTB5310)	GH96-04138A
QME01		DOME SHEET-GTB5310 QWERTY	GH59-08344A
QME03		TOUCH/PANEL-GT-B5310	GH59-08335A
QMO01		MOTOR LINEAR VIBRATION-GT-B5310	GH31-00486A
QMP01		A/S ASSY-PBA MAIN GT_B5310	GH82-04259A
QPC01		ASSY ETC-SLIDE FPCB(GTB5310)	GH59-08251A
QRF03		RMO COVER-EAR V3	GH73-13675A
QSH01		ASSY COVER-SHIELD CAN	GH98-14234A
QSP01		MODULE-GT_B5310 SPK	GH59-08274A
QVO01		PMO KEY-VOLUME	GH72-55645A
QFR01		ASSY CASE-FRONT	GH98-14229A
	QRF06	PMO COVER-USB	GH72-55639A
QRE01		ASSY CASE-REAR	GH98-14231A
	QCK02	PMO KEY-CAM	GH72-55649A

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6. MAIN Electrical Parts List

SEC CODE	Design LOC	Description
0403-001547	ZD403	DIODE-ZENER
0406-001254	ZD500,ZD501,ZD502	DIODE-TVS
0406-001254	ZD504,ZD505,ZD506	DIODE-TVS
0406-001254	ZD604,ZD605,ZD700	DIODE-TVS
0406-001254	ZD708,ZD709,ZD710	DIODE-TVS
0406-001254	ZD711	DIODE-TVS
0406-001256	ZD602,ZD603	DIODE-TVS
0406-001286	ZD400,ZD600,ZD601	DIODE-TVS
0406-001293	ZD503,ZD507	DIODE-TVS
0406-001329	ZD405,ZD406	DIODE-TVS
0406-001375	ZD404	DIODE-TVS
0502-001322	Q400	TR-POWER
0601-002268	LED700,LED701,LED702	LED
0601-002268	LED703	LED
0801-002882	U301	IC
0801-003200	U103	IC
1001-001394	U700	IC
1001-001598	U402	IC
1001-001607	U100	IC
1003-002277	U602	IC
1009-001036	U300	IC
1108-000266	UME300	MEMORY
1201-002781	PAM200	IC
1201-002864	U503	IC
1201-002955	PAM100	IC
1202-001079	U501,U502	IC
1203-004340	U601	IC
1203-004776	U701	IC
1203-004819	U603	IC
1203-005367	U401	IC
1203-005675	U201	IC
1203-005809	U400	IC
1204-003112	U604	IC
1205-003623	EXP700	IC
1205-003761	U200	IC
1205-003764	UCP300	IC
1205-003866	U101	IC
1205-003868	U102	IC
1209-001817	U600	IC

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SEC CODE	Design LOC	Description
1404-001221	V300	THERMISTOR
2007-000143	R702,R703	R-CHIP
2007-000148	R101,R700,R720	R-CHIP
2007-000159	R212	R-CHIP
2007-000162	R314,R315,R316,R332	R-CHIP
2007-000162	R333,R501	R-CHIP
2007-000163	R211	R-CHIP
2007-000170	R704,R705,R706	R-CHIP
2007-000172	R504,R506	R-CHIP
2007-001292	R709,R710,R711,R712	R-CHIP
2007-003010	R310,R311	R-CHIP
2007-003014	R320	R-CHIP
2007-007100	R405	R-CHIP
2007-007132	R132	R-CHIP
2007-007148	R205	R-CHIP
2007-007197	R610	R-CHIP
2007-007318	R512	R-CHIP
2007-007981	R312,R602	R-CHIP
2007-008045	R138,R309,R502,R505	R-CHIP
2007-008045	R708	R-CHIP
2007-008050	R204	R-CHIP
2007-008055	R100,R106,R107,R120	R-CHIP
2007-008055	R121,R123,R124,R129	R-CHIP
2007-008055	R130,R139,R143,R308	R-CHIP
2007-008055	R411,R415	R-CHIP
2007-008213	R325	R-CHIP
2007-008401	R317	R-CHIP
2007-008419	R102,R103,R104,R105	R-CHIP
2007-008419	R326	R-CHIP
2007-008483	R203,R207	R-CHIP
2007-008516	R208,R404,R408,R605	R-CHIP
2007-008516	R701	R-CHIP
2007-008531	R612	R-CHIP
2007-008588	R329,R330,R409,R410	R-CHIP
2007-008588	R600,R601,R603,R604	R-CHIP
2007-008780	R192,R193	R-CHIP
2007-008786	R202,R206	R-CHIP
2007-008798	R131	R-CHIP
2007-008809	R301,R302,R306,R307	R-CHIP

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SEC CODE	Design LOC	Description
2007-008809	R406,R407	R-CHIP
2007-009084	R327,R335,R401,R503	R-CHIP
2007-009084	R507,R509	R-CHIP
2007-009158	R313	R-CHIP
2007-009171	R112,R113,R114,R115	R-CHIP
2007-009171	R116,R510	R-CHIP
2007-009212	R403	R-CHIP
2007-009766	R611	R-CHIP
2007-009969	R513	R-CHIP
2007-010071	R400	R-CHIP
2203-000233	C209,C217,C254	C-CERAMIC,CHIP
2203-000425	C409,C410	C-CERAMIC,CHIP
2203-000438	C211,C525,C526	C-CERAMIC,CHIP
2203-000725	C603	C-CERAMIC,CHIP
2203-000812	C513,C514,C515,C518	C-CERAMIC,CHIP
2203-000812	C528,C531,C535,C536	C-CERAMIC,CHIP
2203-001153	C201,C215	C-CERAMIC,CHIP
2203-002677	C118,C193	C-CERAMIC,CHIP
2203-002709	C605	C-CERAMIC,CHIP
2203-005052	C291	C-CERAMIC,CHIP
2203-005288	C106,C192	C-CERAMIC,CHIP
2203-005446	C219	C-CERAMIC,CHIP
2203-005552	C220	C-CERAMIC,CHIP
2203-005682	C104,C105,C259,C333	C-CERAMIC,CHIP
2203-005682	C334,C335,C336,C337	C-CERAMIC,CHIP
2203-005682	C338,C407,C436,C532	C-CERAMIC,CHIP
2203-005682	C611,C612	C-CERAMIC,CHIP
2203-005729	C210,C214,C243	C-CERAMIC,CHIP
2203-005731	C408,C437	C-CERAMIC,CHIP
2203-005732	C108,C207	C-CERAMIC,CHIP
2203-005736	C102,C109,C115,C171	C-CERAMIC,CHIP
2203-005736	C202,C203,C204,C244	C-CERAMIC,CHIP
2203-005736	C246,C340,C432	C-CERAMIC,CHIP
2203-005792	C170,C236,C237,C240	C-CERAMIC,CHIP
2203-005792	C241,C242,C247	C-CERAMIC,CHIP
2203-005806	C107,C252	C-CERAMIC,CHIP
2203-005968	C430	C-CERAMIC,CHIP
2203-006048	C141,C172,C306,C311	C-CERAMIC,CHIP
2203-006048	C312,C314,C316,C329	C-CERAMIC,CHIP

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SEC CODE	Design LOC	Description
2203-006048	C405,C512	C-CERAMIC,CHIP
2203-006123	C159	C-CERAMIC,CHIP
2203-006137	C520,C521	C-CERAMIC,CHIP
2203-006190	C155,C156	C-CERAMIC,CHIP
2203-006194	C131,C162,C222,C223	C-CERAMIC,CHIP
2203-006194	C224,C225,C229,C230	C-CERAMIC,CHIP
2203-006194	C250,C406	C-CERAMIC,CHIP
2203-006208	C422,C427	C-CERAMIC,CHIP
2203-006257	C701,C702	C-CERAMIC,CHIP
2203-006260	C169	C-CERAMIC,CHIP
2203-006305	C116,C117,C152,C153	C-CERAMIC,CHIP
2203-006305	C154,C235	C-CERAMIC,CHIP
2203-006399	C101,C232,C301,C309	C-CERAMIC,CHIP
2203-006399	C313,C315,C317,C319	C-CERAMIC,CHIP
2203-006399	C321,C326,C327,C331	C-CERAMIC,CHIP
2203-006399	C403,C404,C415,C519	C-CERAMIC,CHIP
2203-006399	C522,C523,C524,C527	C-CERAMIC,CHIP
2203-006399	C600,C601,C606,C608	C-CERAMIC,CHIP
2203-006399	C613	C-CERAMIC,CHIP
2203-006423	C126,C127,C138,C140	C-CERAMIC,CHIP
2203-006423	C167,C218,C227,C234	C-CERAMIC,CHIP
2203-006423	C251,C253,C300,C305	C-CERAMIC,CHIP
2203-006423	C307,C318,C322,C325	C-CERAMIC,CHIP
2203-006423	C328,C330,C339,C616	C-CERAMIC,CHIP
2203-006556	C435	C-CERAMIC,CHIP
2203-006562	C421,C424,C425,C429	C-CERAMIC,CHIP
2203-006562	C431,C529,C530,C533	C-CERAMIC,CHIP
2203-006562	C534,C607	C-CERAMIC,CHIP
2203-006611	C122,C123,C124,C238	C-CERAMIC,CHIP
2203-006611	C239,C245	C-CERAMIC,CHIP
2203-006674	C248	C-CERAMIC,CHIP
2203-006824	C128,C257	C-CERAMIC,CHIP
2203-006825	C423,C426	C-CERAMIC,CHIP
2203-006838	C125,C401,C402,C411	C-CERAMIC,CHIP
2203-006838	C412,C413,C414,C416	C-CERAMIC,CHIP
2203-006838	C417,C418,C419,C420	C-CERAMIC,CHIP
2203-006838	C610,C614,C615	C-CERAMIC,CHIP
2203-006839	C119,C302,C310,C323	C-CERAMIC,CHIP
2203-006839	C434,C700	C-CERAMIC,CHIP

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SEC CODE	Design LOC	Description
2203-006841	C438	C-CERAMIC,CHIP
2203-006846	C111,C165	C-CERAMIC,CHIP
2203-006872	C132,C133,C134,C135	C-CERAMIC,CHIP
2203-006872	C136,C137,C139,C144	C-CERAMIC,CHIP
2203-006872	C145,C146,C147,C148	C-CERAMIC,CHIP
2203-006872	C149,C160,C163,C609	C-CERAMIC,CHIP
2203-006890	C255	C-CERAMIC,CHIP
2203-006979	C120,C121,C303,C304	C-CERAMIC,CHIP
2203-006979	C324,C433	C-CERAMIC,CHIP
2203-007133	C400	C-CERAMIC,CHIP
2203-007147	C114	C-CERAMIC,CHIP
2203-007165	C129,C150,C151	C-CERAMIC,CHIP
2203-007194	C168	C-CERAMIC,CHIP
2203-007210	C142,C143,C249	C-CERAMIC,CHIP
2203-007271	C602,C604	C-CERAMIC,CHIP
2203-007369	C226,C231	C-CERAMIC,CHIP
2203-007425	C428	C-CERAMIC,CHIP
2404-001374	TA200	C-TA,CHIP
2404-001381	TA400,TA500	C-TA,CHIP
2404-001557	TA501	C-TA,CHIP
2703-001751	L291	INDUCTOR-SMD
2703-002176	L204	INDUCTOR-SMD
2703-002198	L293	INDUCTOR-SMD
2703-002199	L200	INDUCTOR-SMD
2703-002204	L294	INDUCTOR-SMD
2703-002207	L297	INDUCTOR-SMD
2703-002231	L505	INDUCTOR-SMD
2703-002367	L292,L295	INDUCTOR-SMD
2703-002368	L205	INDUCTOR-SMD
2703-002369	L296	INDUCTOR-SMD
2703-002793	L209,L213	INDUCTOR-SMD
2703-002795	L210	INDUCTOR-SMD
2703-002798	L191,L192	INDUCTOR-SMD
2703-002900	L208	INDUCTOR-SMD
2703-002903	L111,L215	INDUCTOR-SMD
2703-002919	L212,L214	INDUCTOR-SMD
2703-002958	L103	INDUCTOR-SMD
2703-003003	L211	INDUCTOR-SMD
2703-003343	L400,L401	INDUCTOR-SMD

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SEC CODE	Design LOC	Description
2703-003685	L216	INDUCTOR-SMD
2703-003698	L110	INDUCTOR-SMD
2801-004373	OSC400	CRYSTAL-UNIT
2801-004589	OSC100	CRYSTAL-UNIT
2809-001281	TCX200	OSCILLATOR-VCTCXO
2809-001348	TCX100	OSCILLATOR-VCTCXO
2901-001470	F603,F604	FILTER-EMI SMD
2901-001499	F600,F601,F602,F700	FILTER-EMI SMD
2901-001525	F605,F606	FILTER-EMI SMD
2904-001759	F101	FILTER-SAW
2904-001789	F203	FILTER-SAW
2909-001299	F100	FILTER-DUPLEXER
2910-000070	DUF201	FILTER
2910-000086	DUF200	FILTER
2911-000136	FEM100	FILTER
3003-001136	MIC500	MIC-CONDENSOR
3301-001438	L116,L300	CORE-FERRITE BEAD
3301-001534	L107,L108,L403	CORE-FERRITE BEAD
3301-001729	L506,L507	CORE-FERRITE BEAD
3301-001812	L700	CORE-FERRITE BEAD
3301-001820	L109,L115	CORE-FERRITE BEAD
3301-001885	L502,L503,L504,L508	CORE-FERRITE BEAD
3301-001917	L509	CORE-FERRITE BEAD
3301-001986	L402	CORE-FERRITE BEAD
3404-001303	TAC700,TAC701,TAC702	SWITCH-TACT
3404-001303	TAC703	SWITCH-TACT
3705-001503	RFS100	CONNECTOR-COAXIAL
3708-002222	SLC600	CONNECTOR-FPC/FFC/PIC
3709-001488	SIM400	CONNECTOR-CARD EDGE
3709-001580	CD400	CONNECTOR-CARD EDGE
3711-006808	BTC400	CONNECTOR-HEADER
3711-007021	HDC600	CONNECTOR-HEADER
3722-002871	IFC400	JACK-PHONE
3722-002990	EAR500	JACK-PHONE
4302-001180	BAT400	BATTERY
GH70-03349A	SC201,SC202	ONBOARD-CLIP-6
GH71-08426A	ANT100,ANT101,ANT103	NPR-CONTACT ANT
GH71-08731A	ANT102,SPK500,SPK501	NPR-CONTACT ANT

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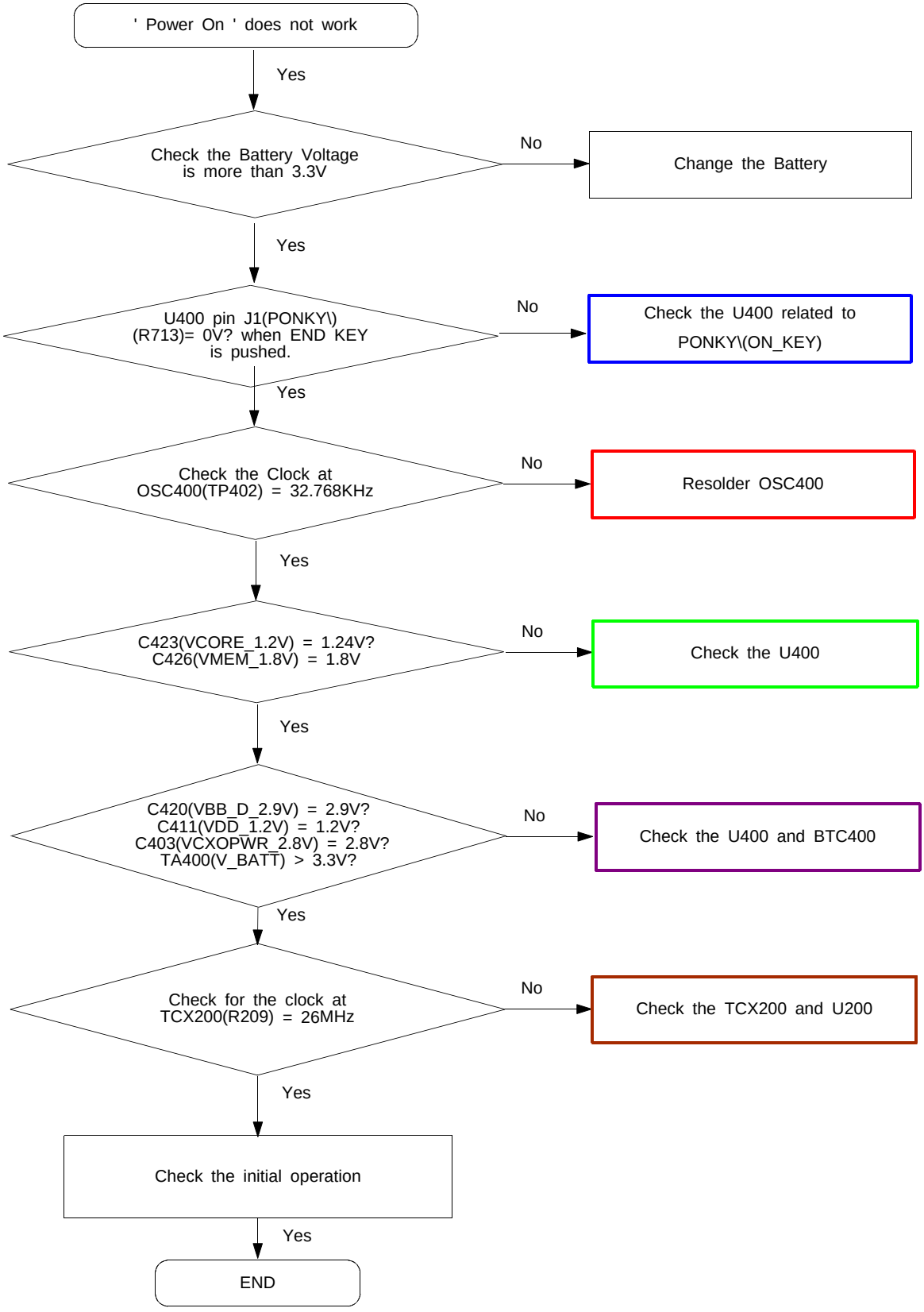
9. Flow Chart of Troubleshooting

9-1. Power On



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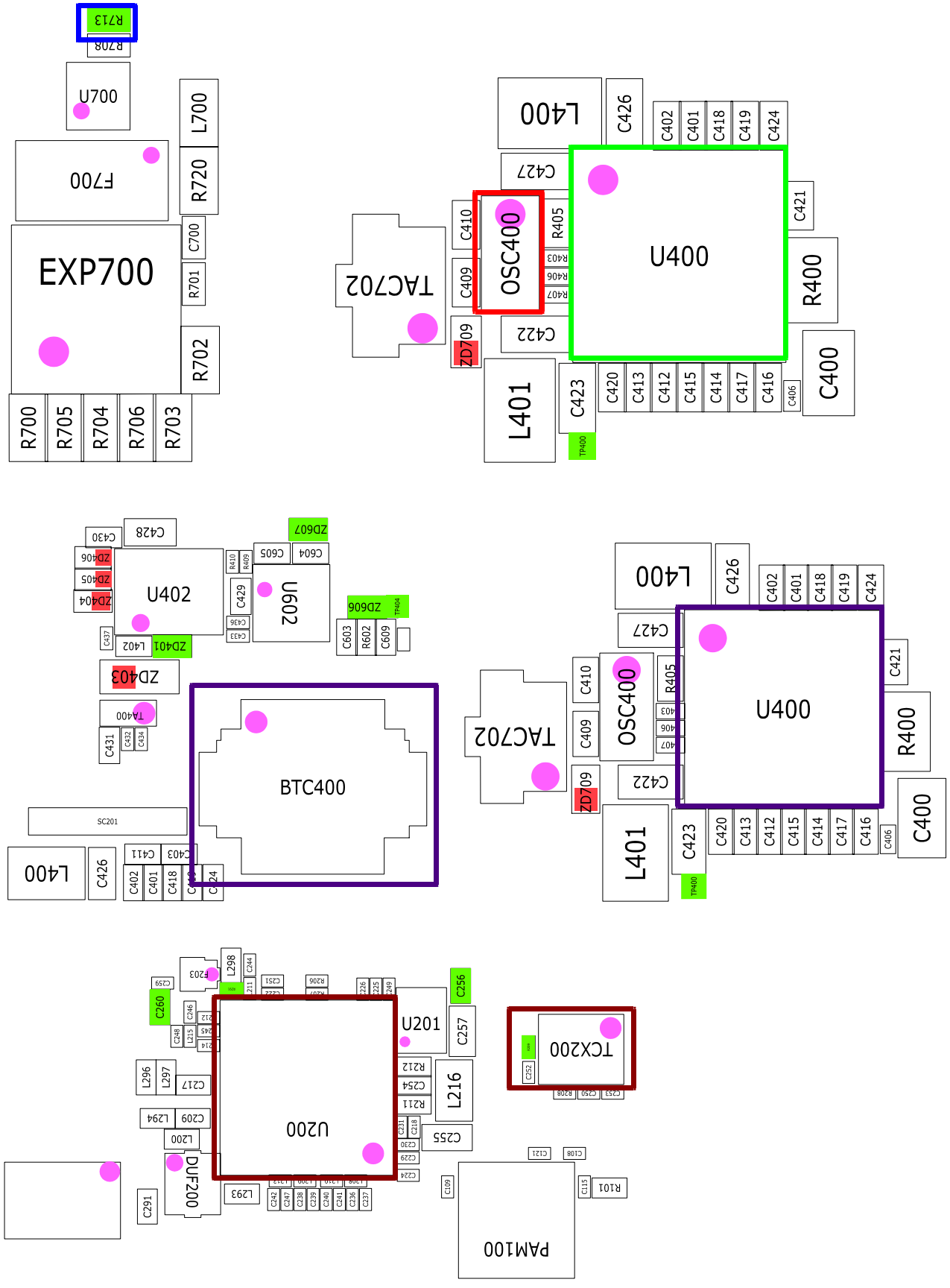

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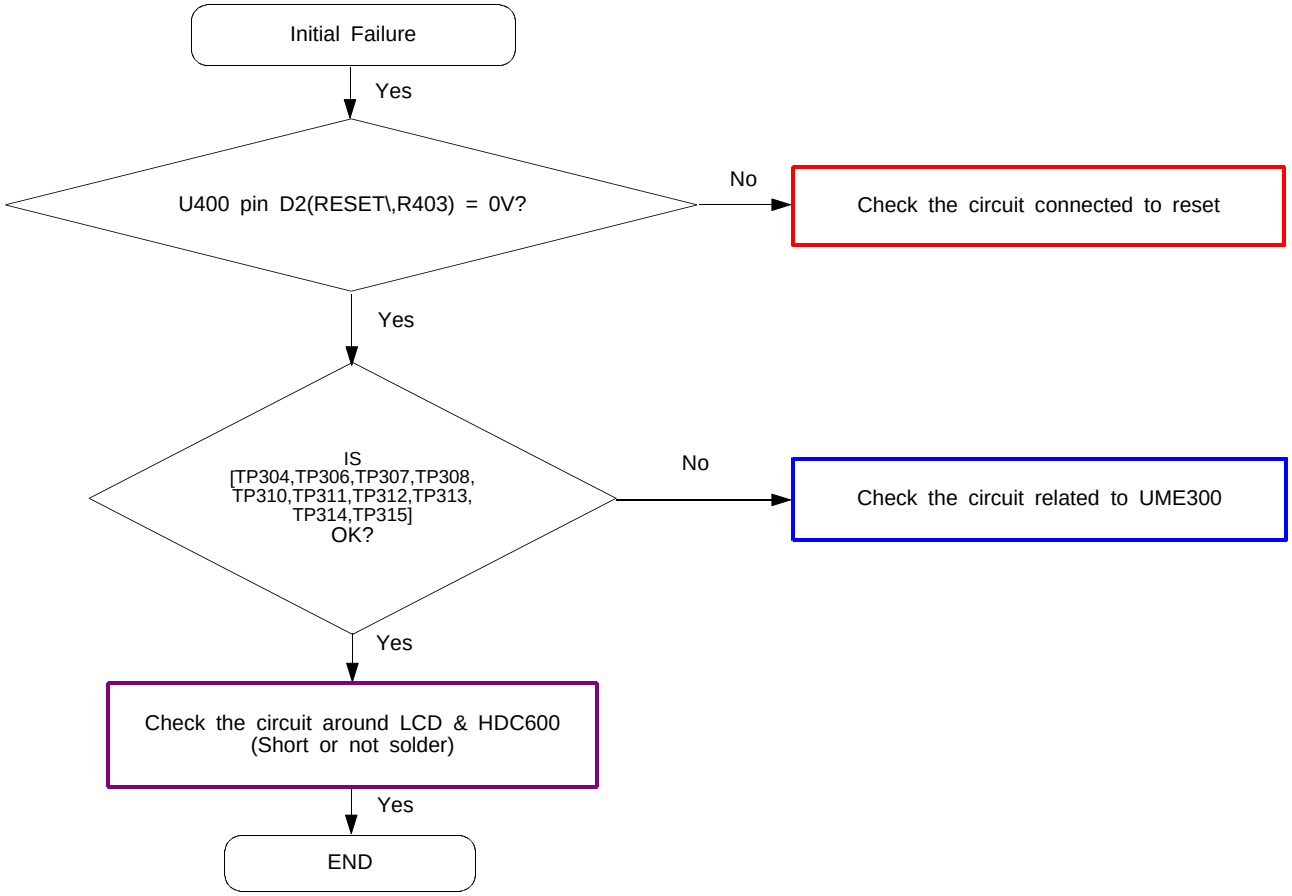
9-2. Initial



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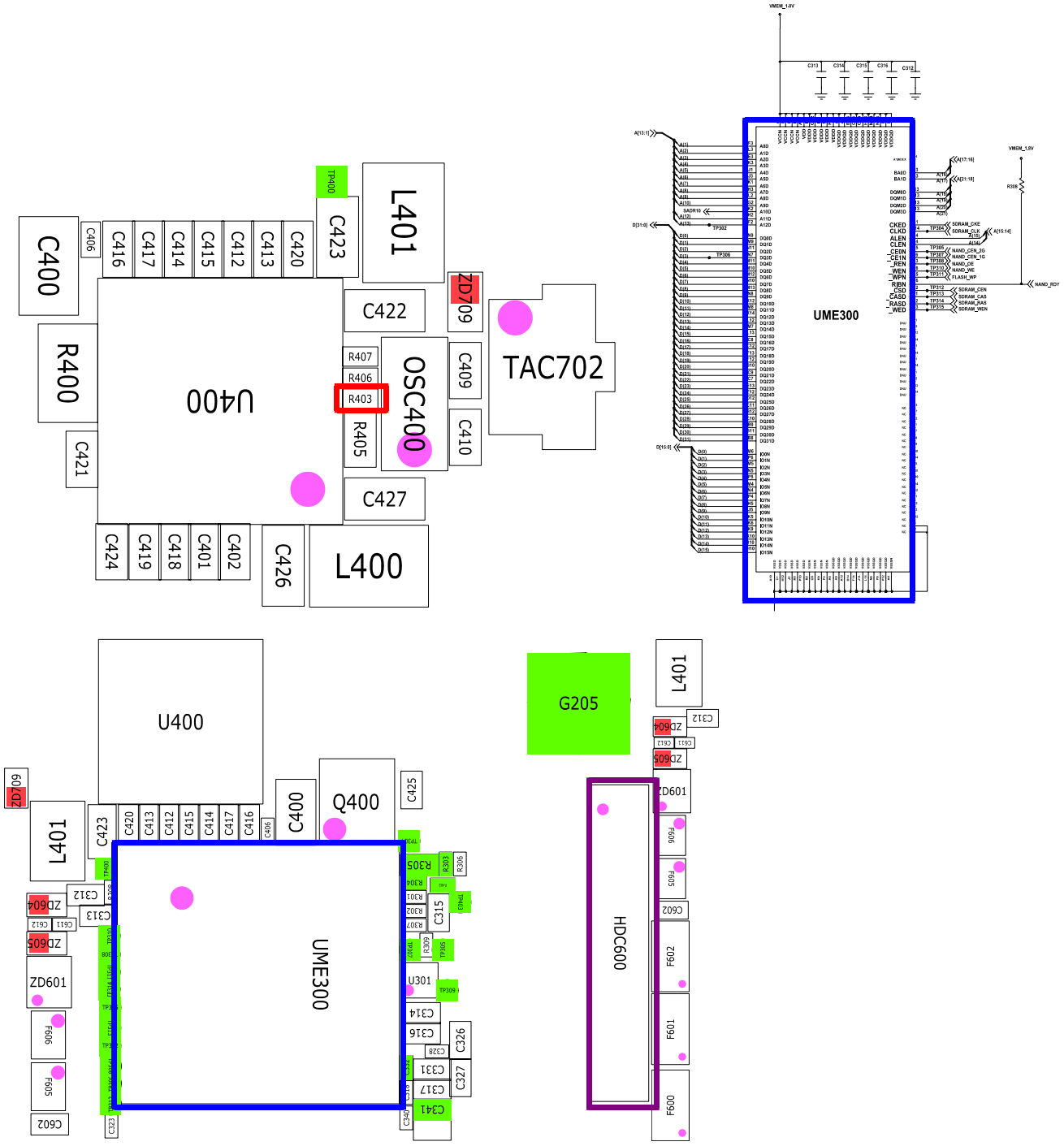

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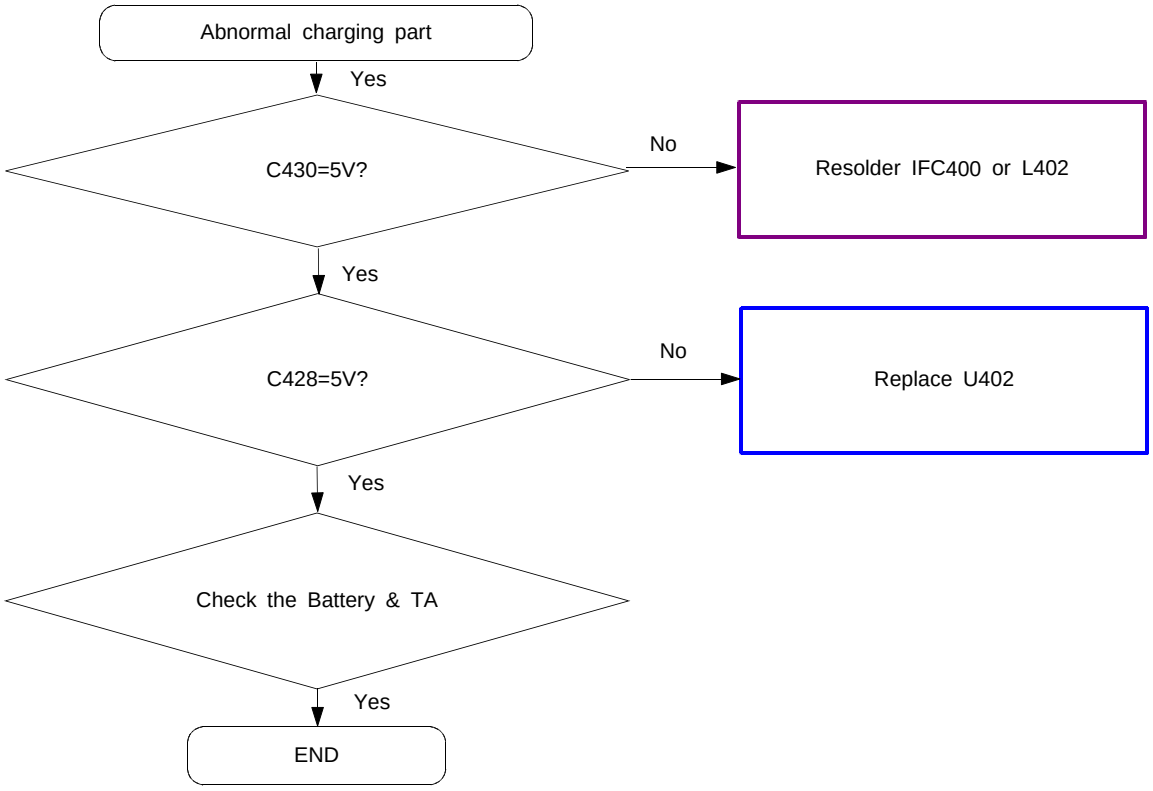
9-3. Charging Part



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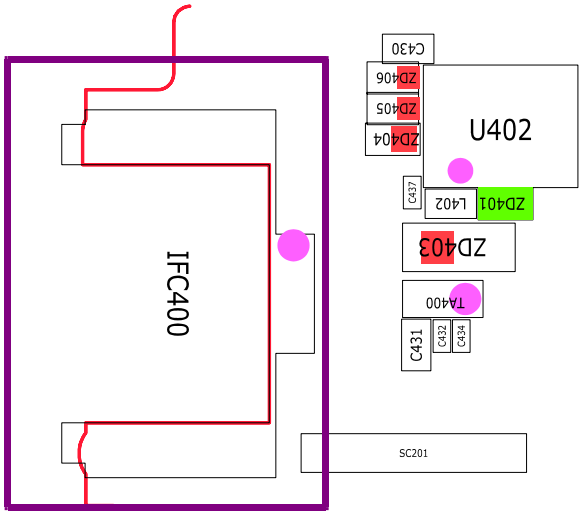

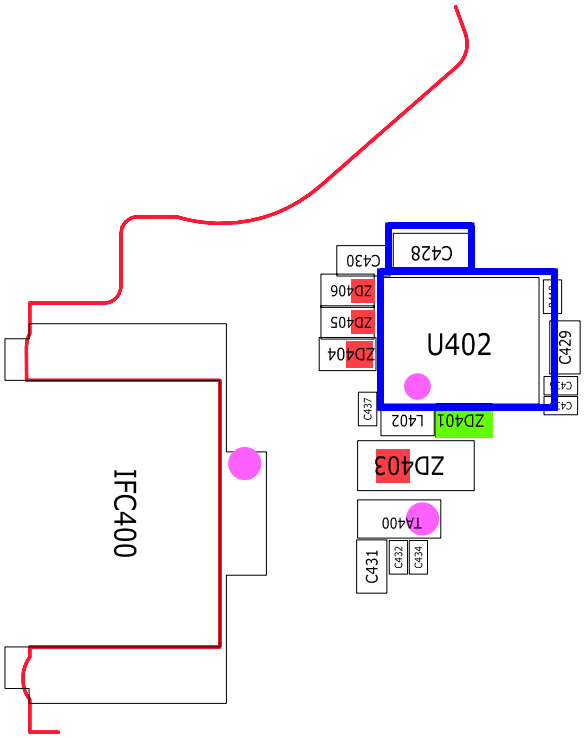

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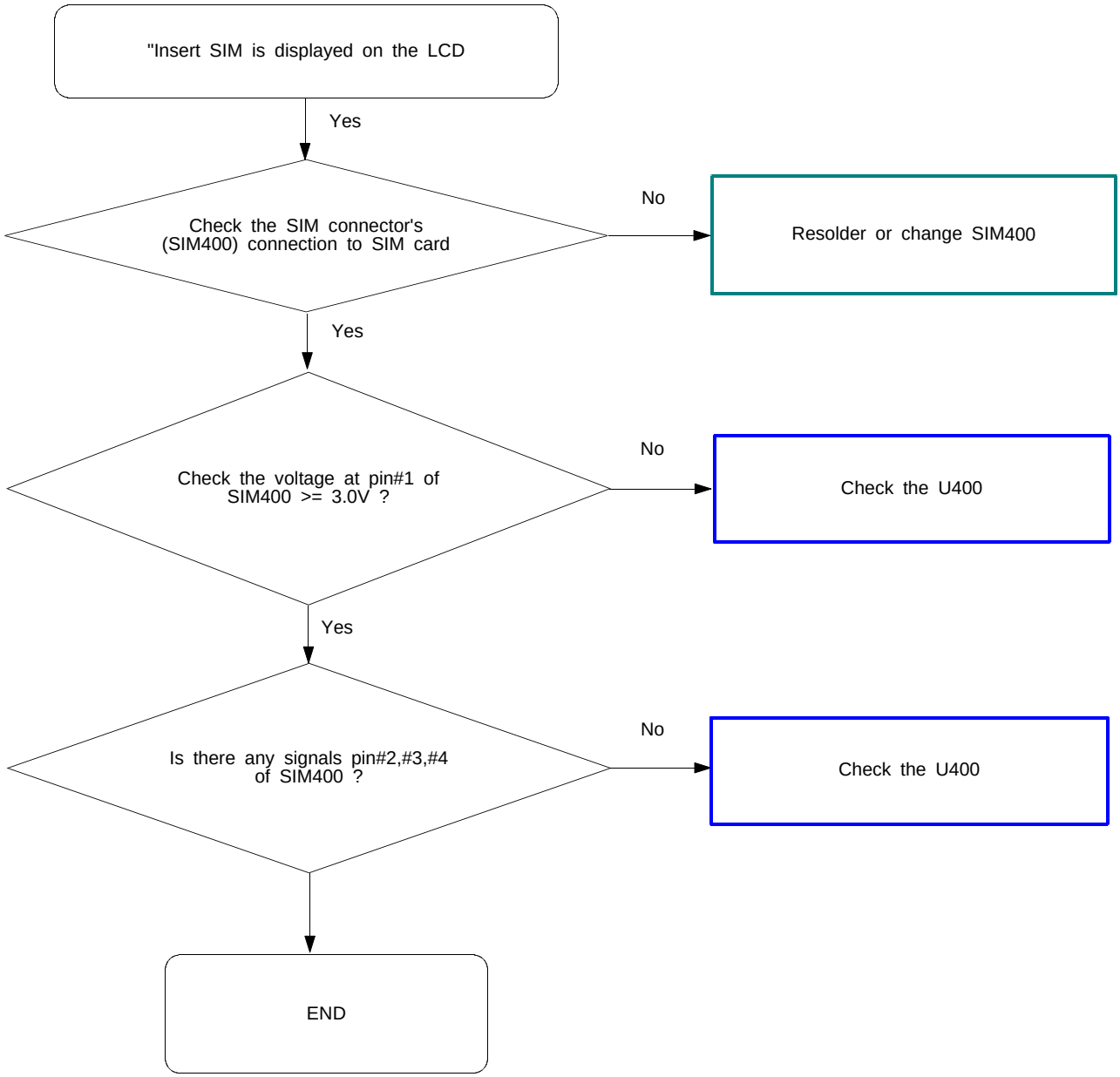
9-4. Sim Part



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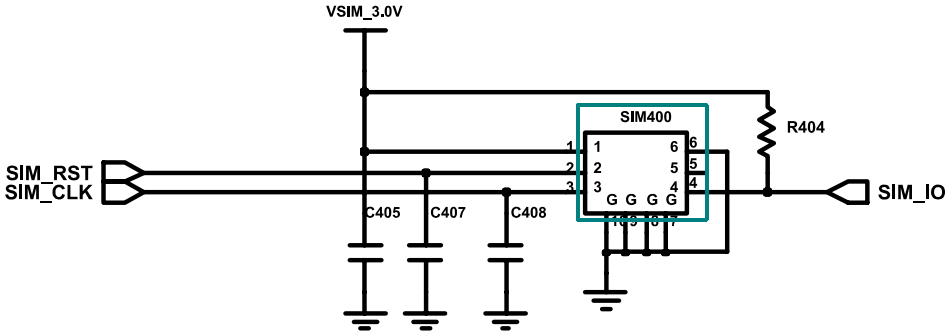

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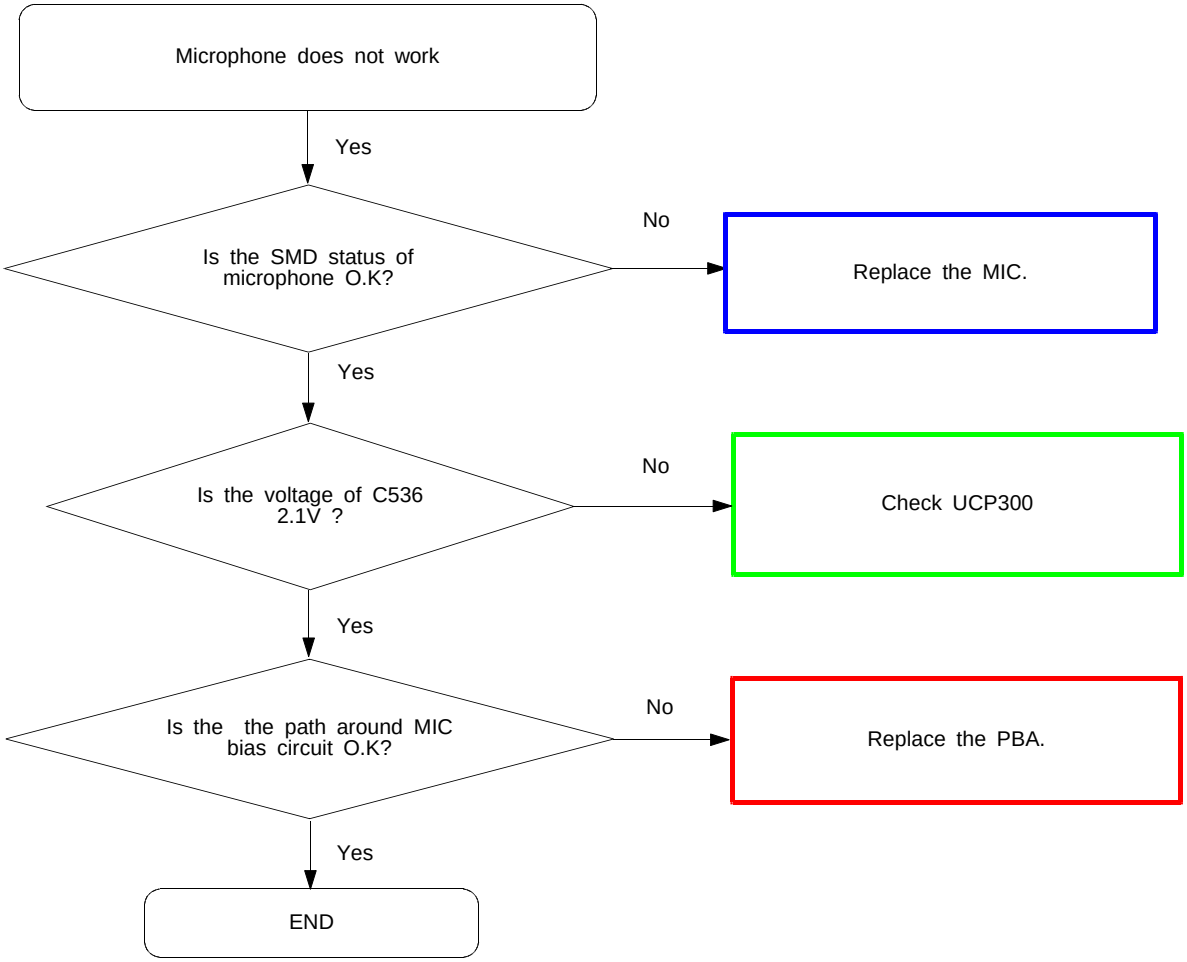
9-5. Microphone Part



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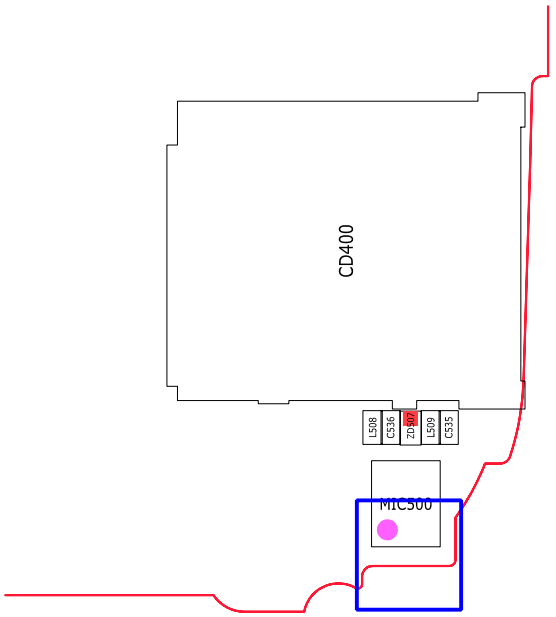

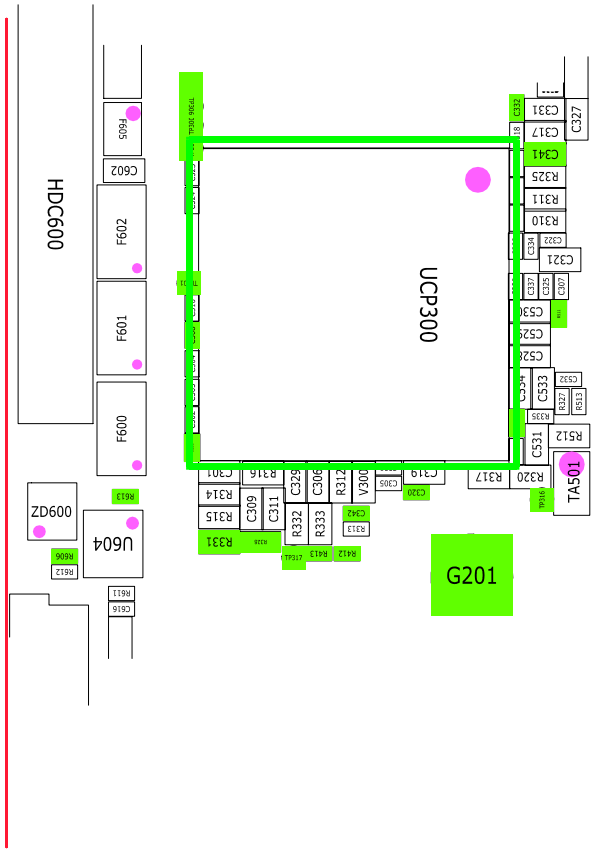

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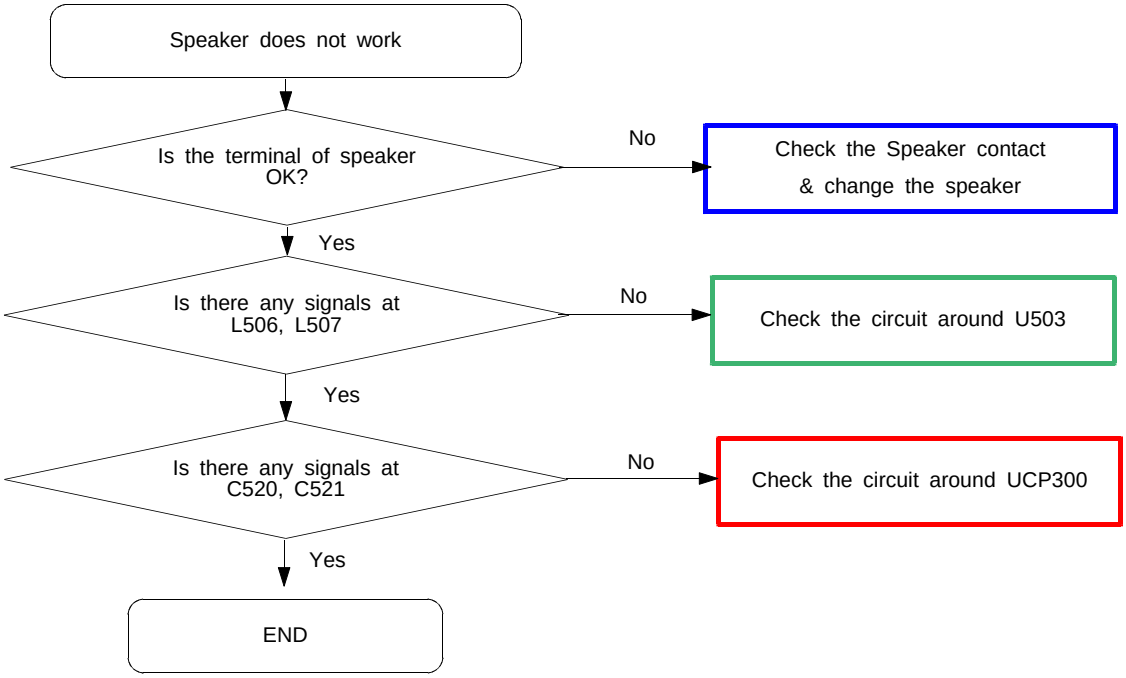
9-6. Speaker Part



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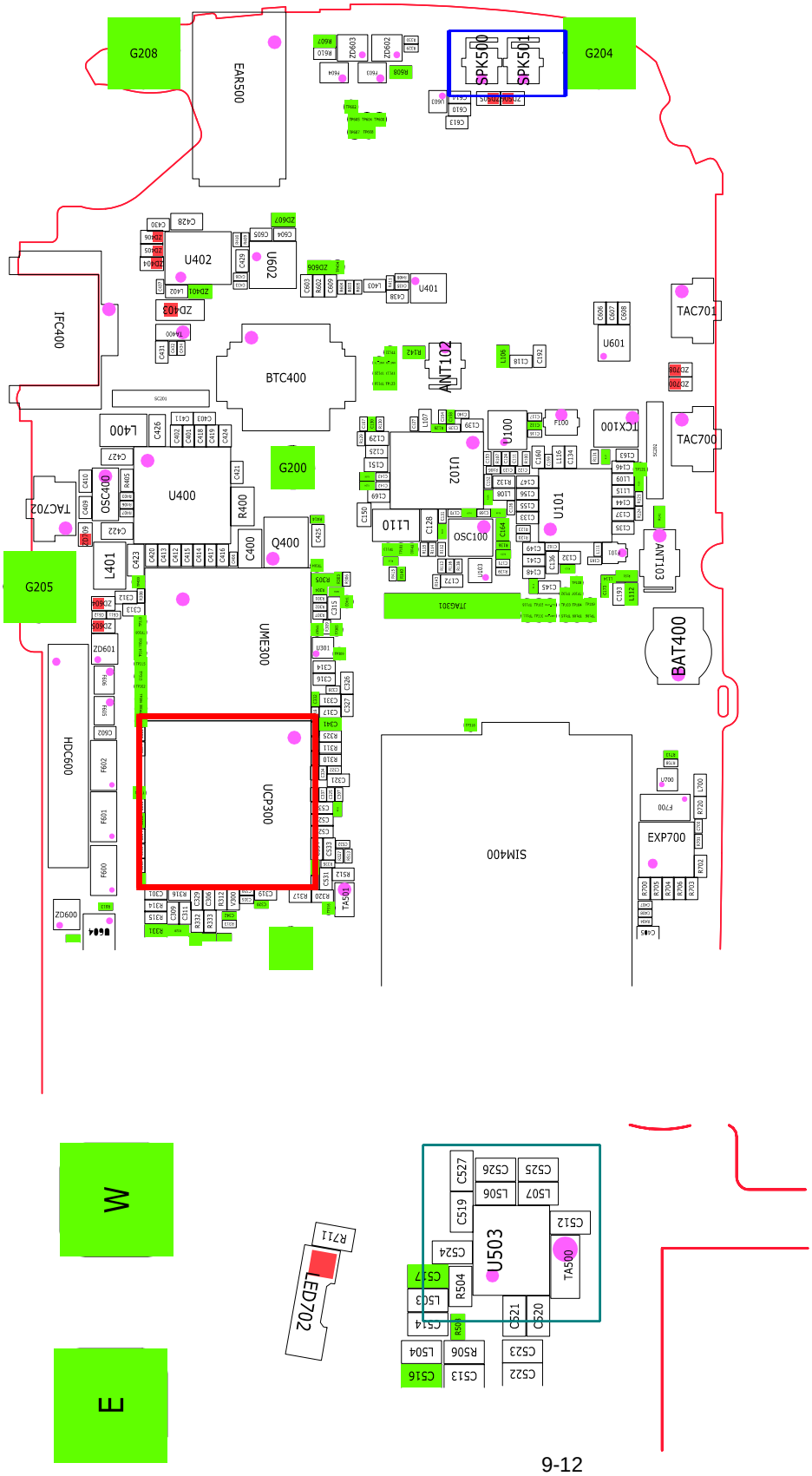
<SPK contact>



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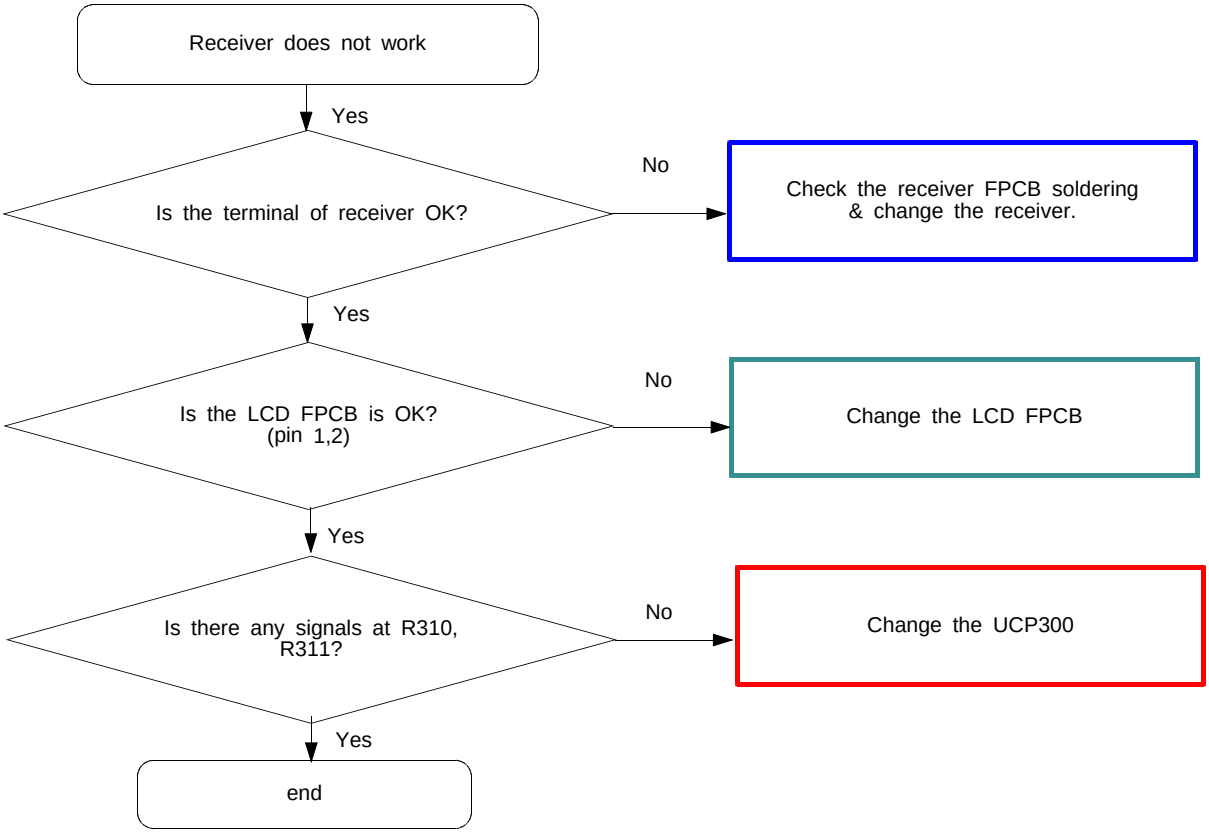
9-7. Receiver Part



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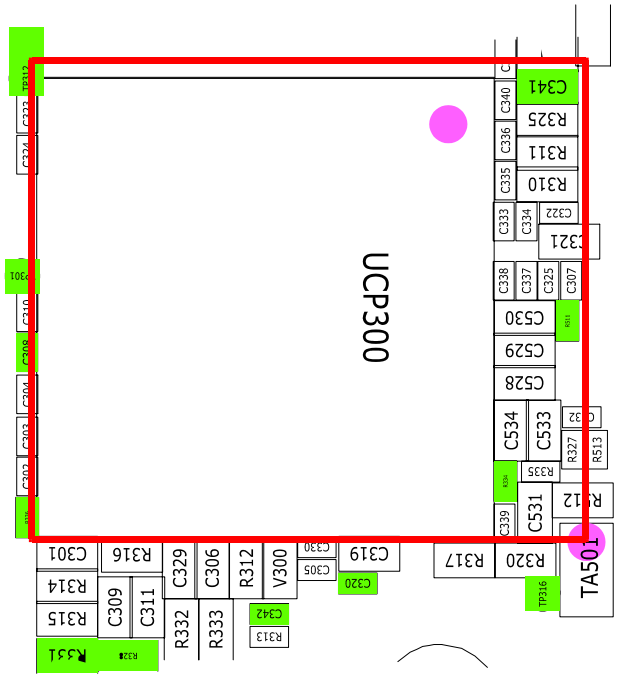

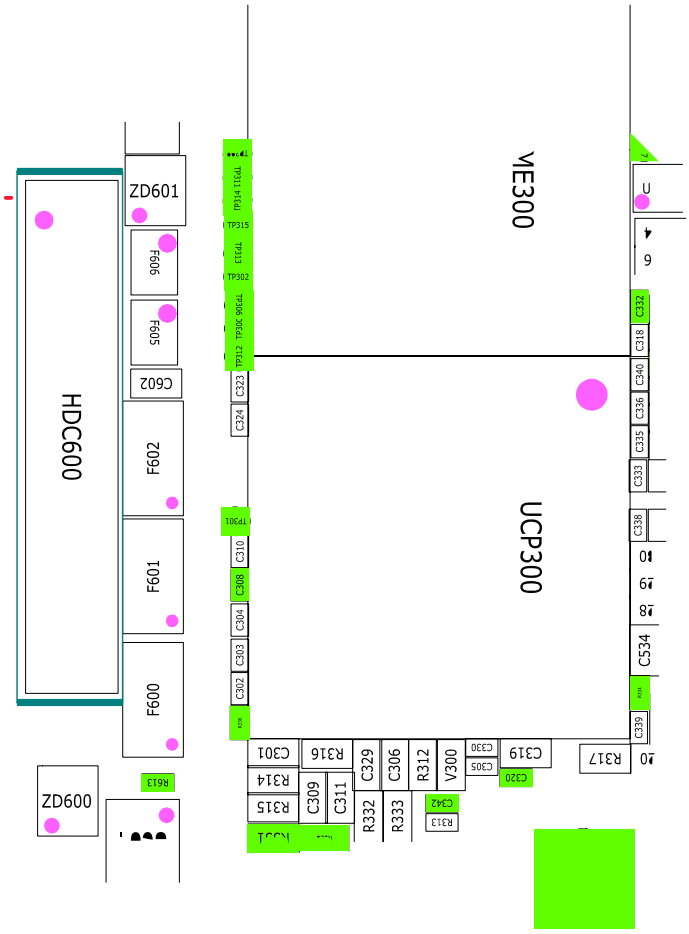

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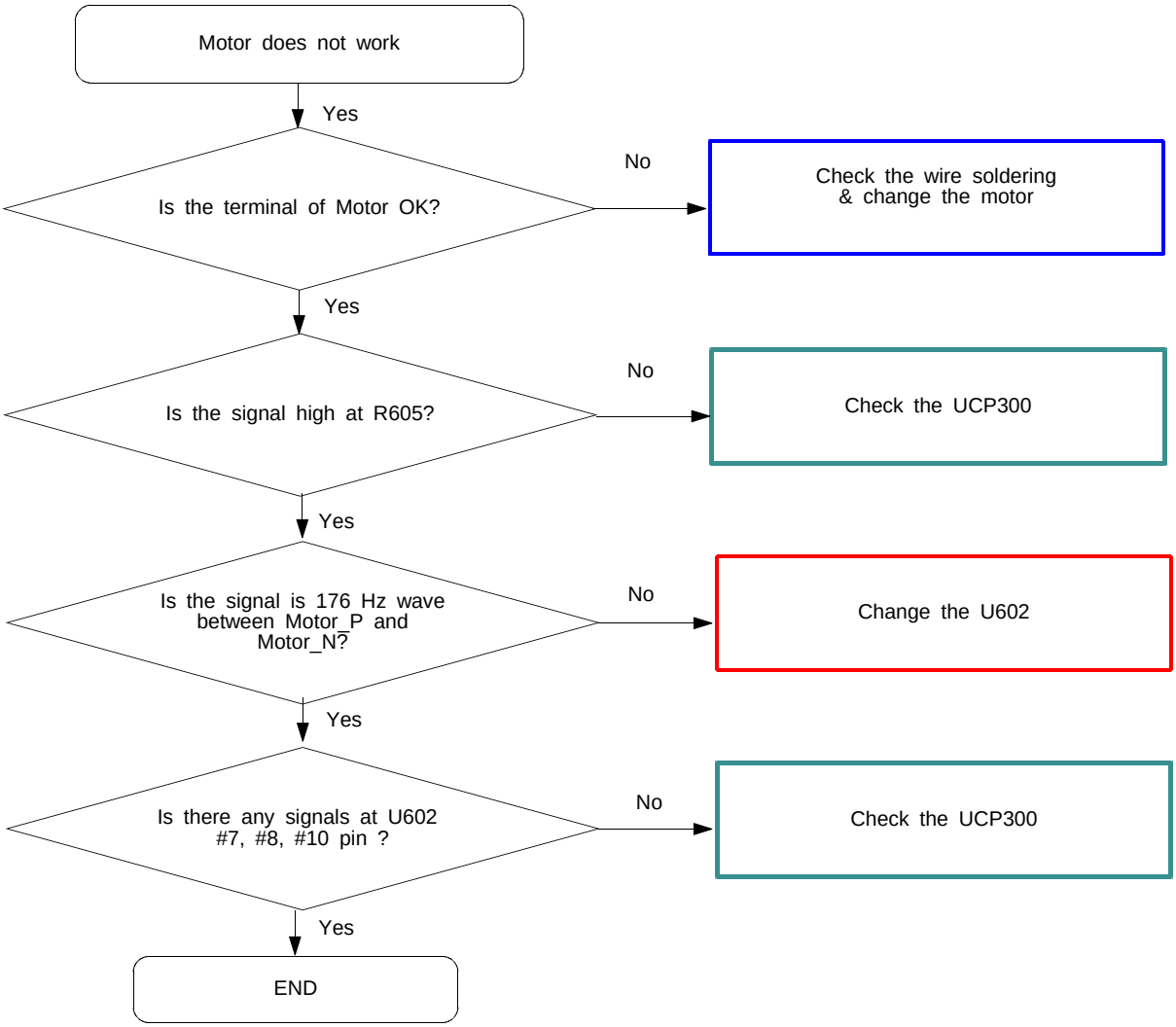
9-7. Motor Part



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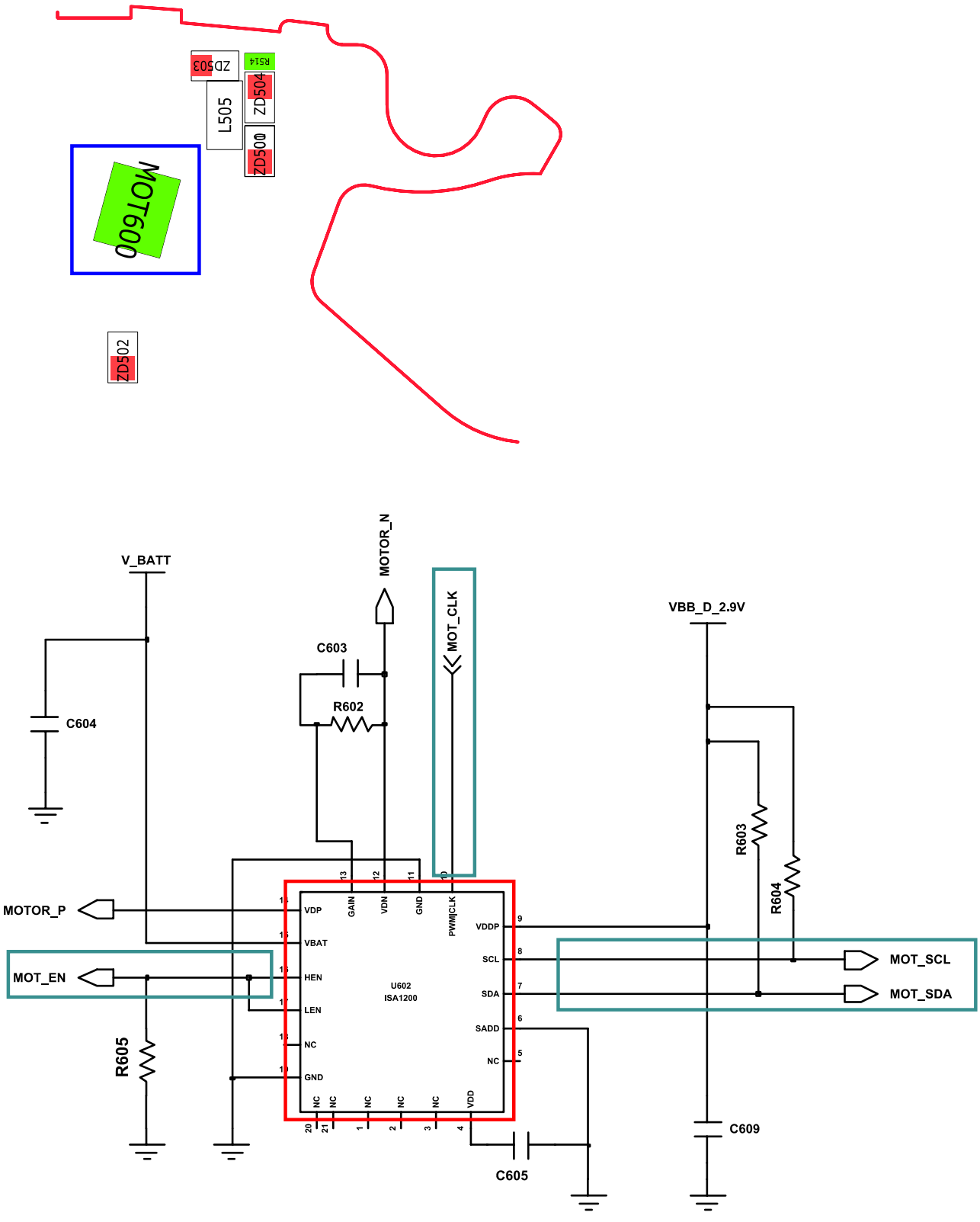

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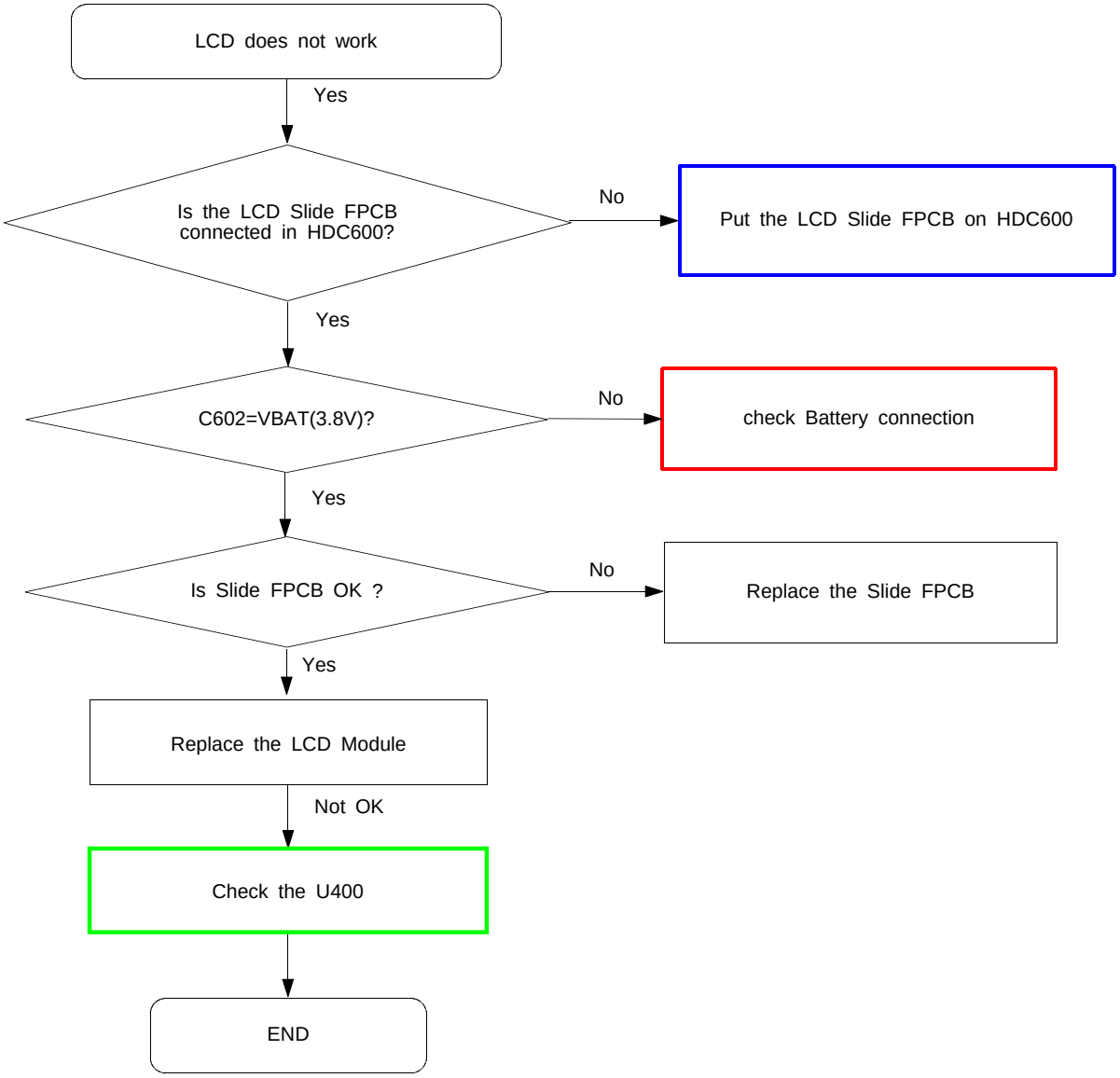
9-8. LCD part



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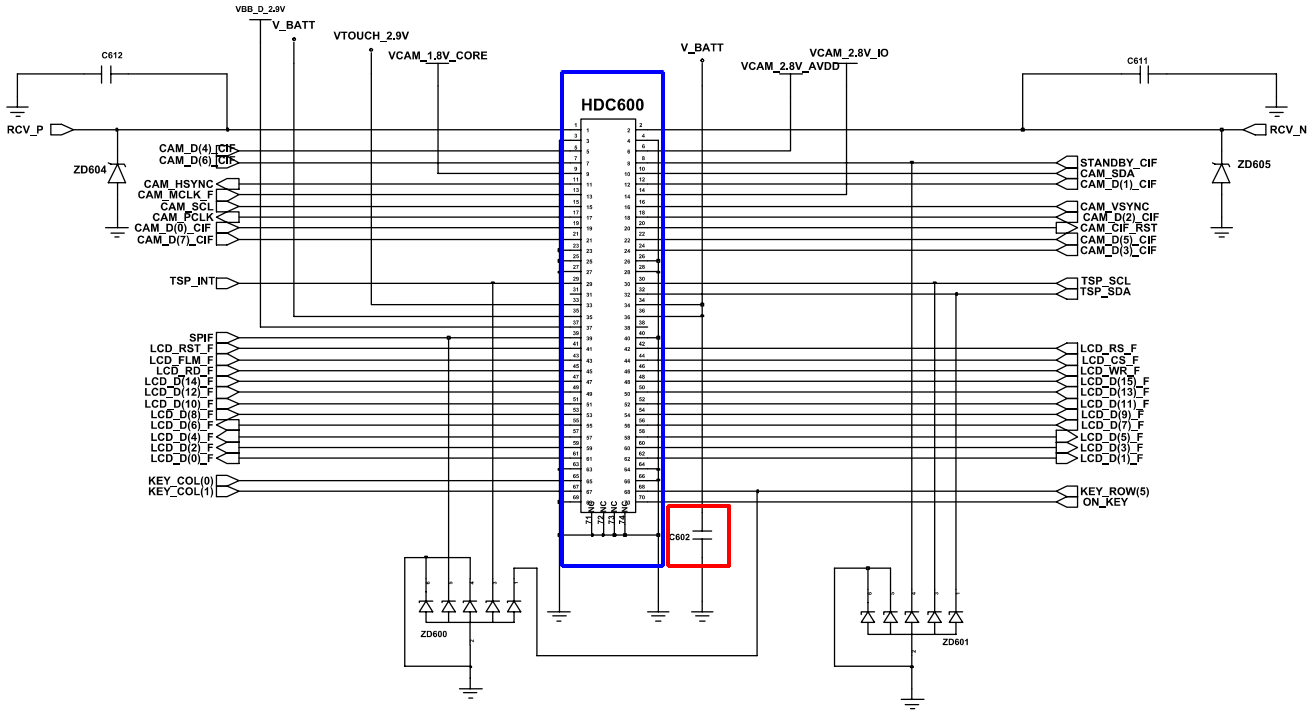

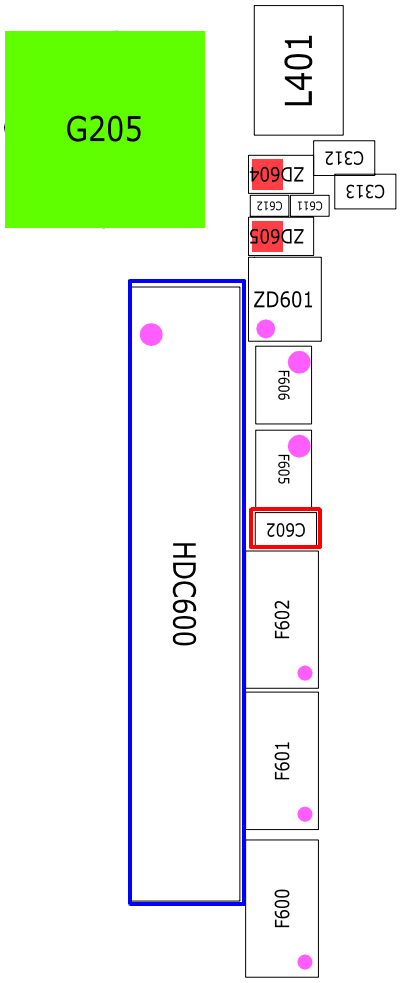

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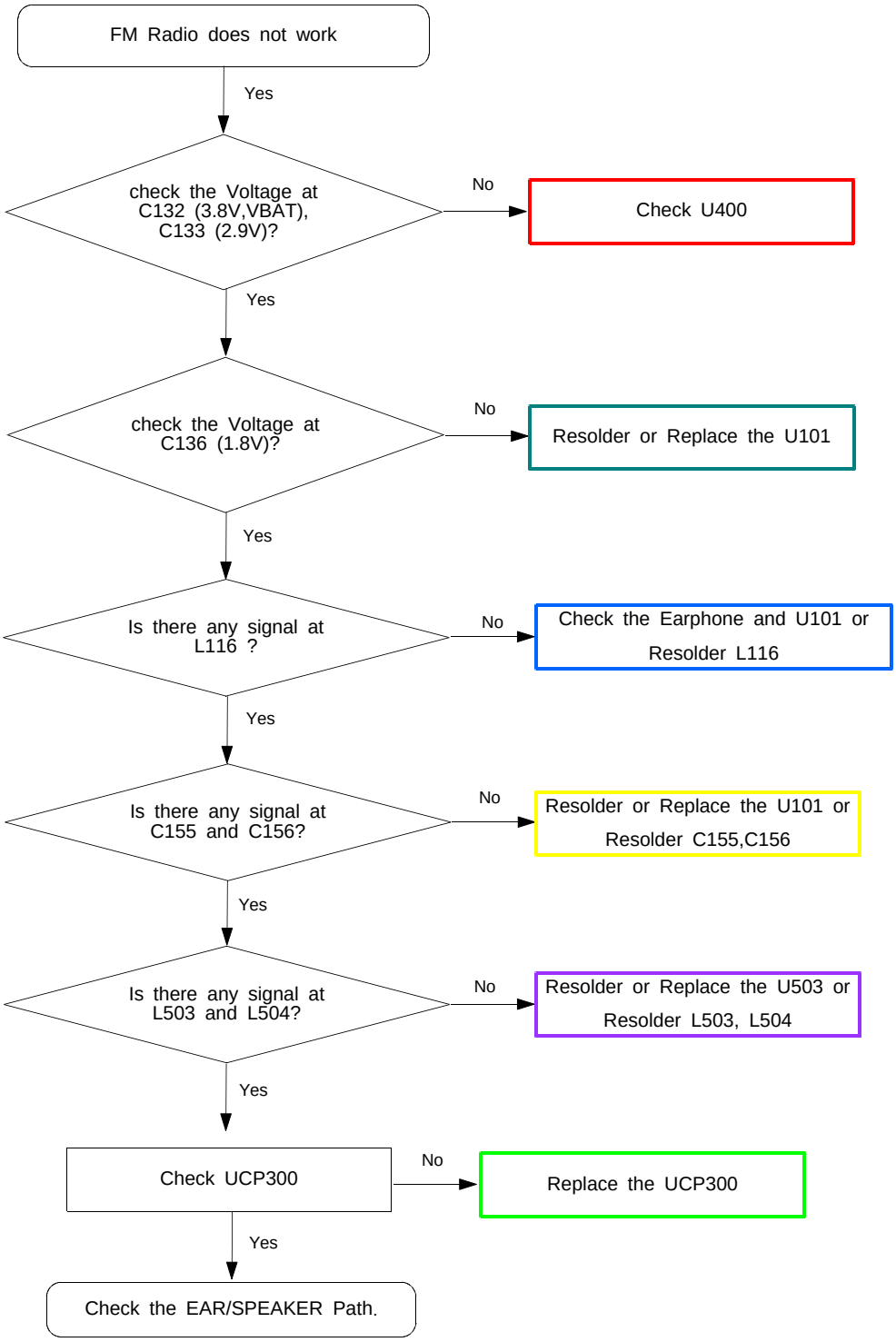
9-9. FM RADIO Part



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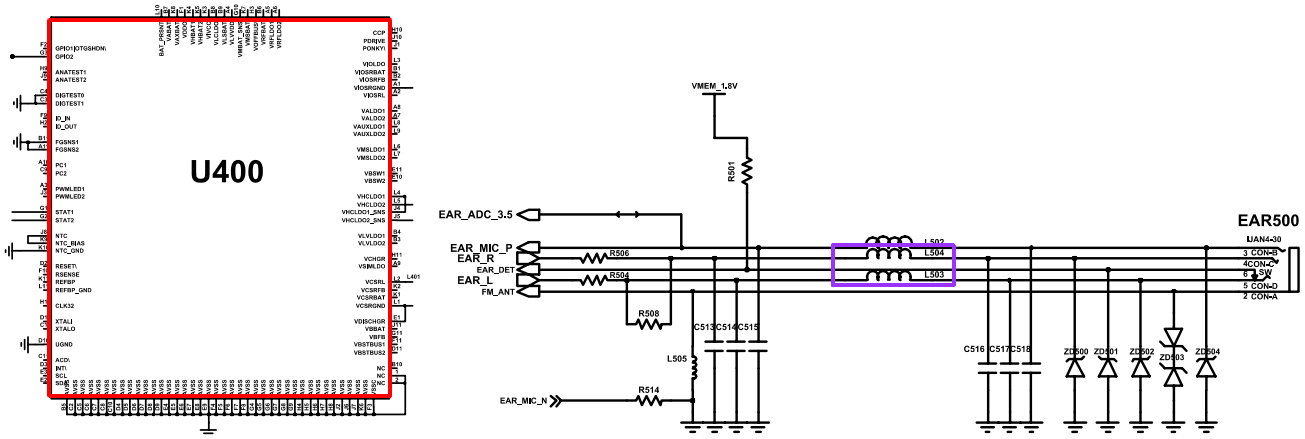

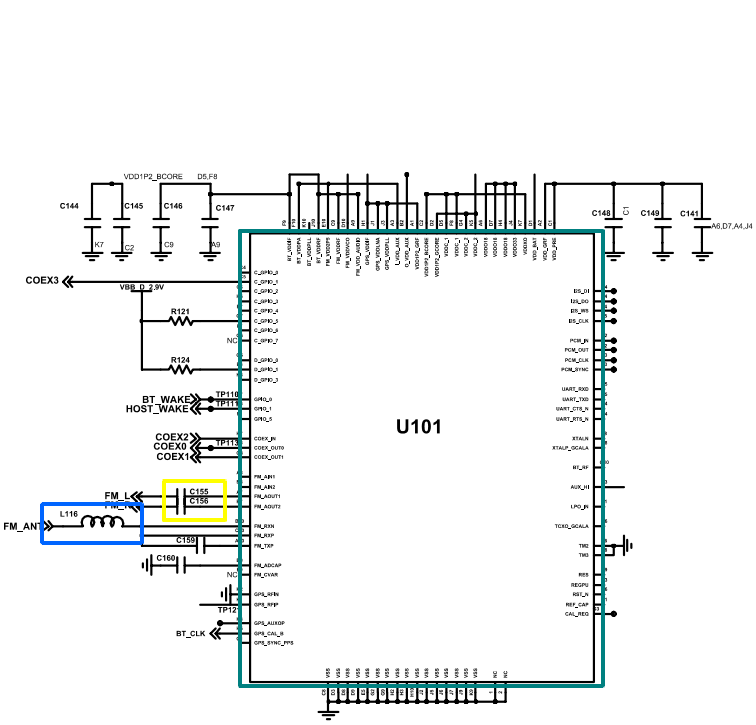

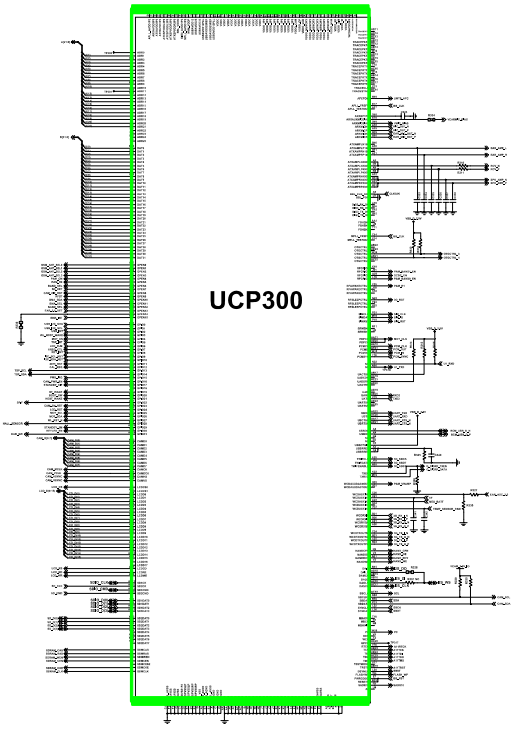

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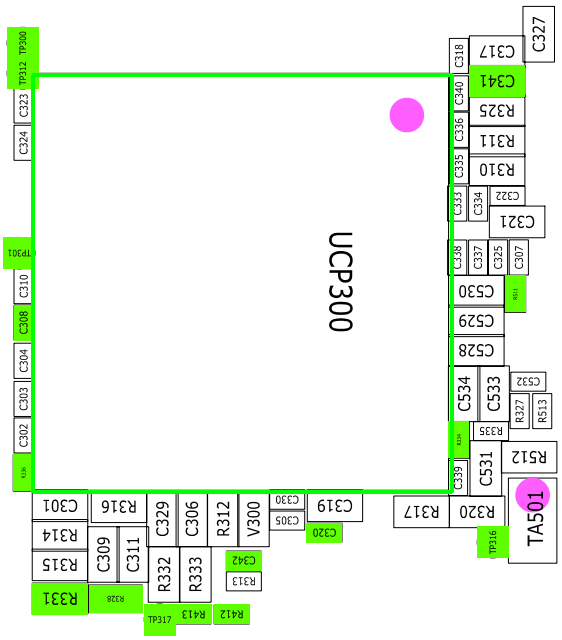

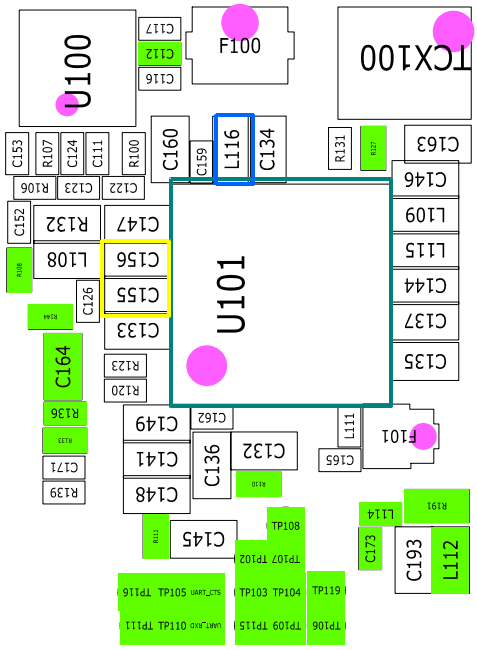

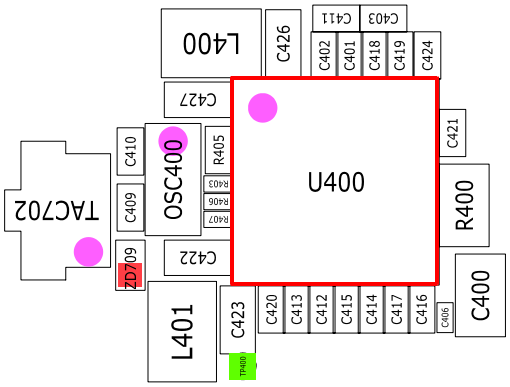

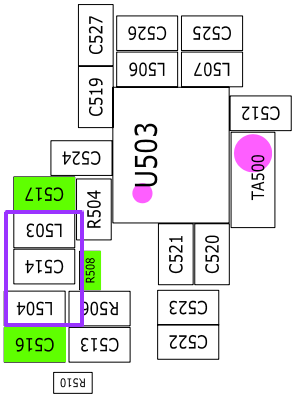

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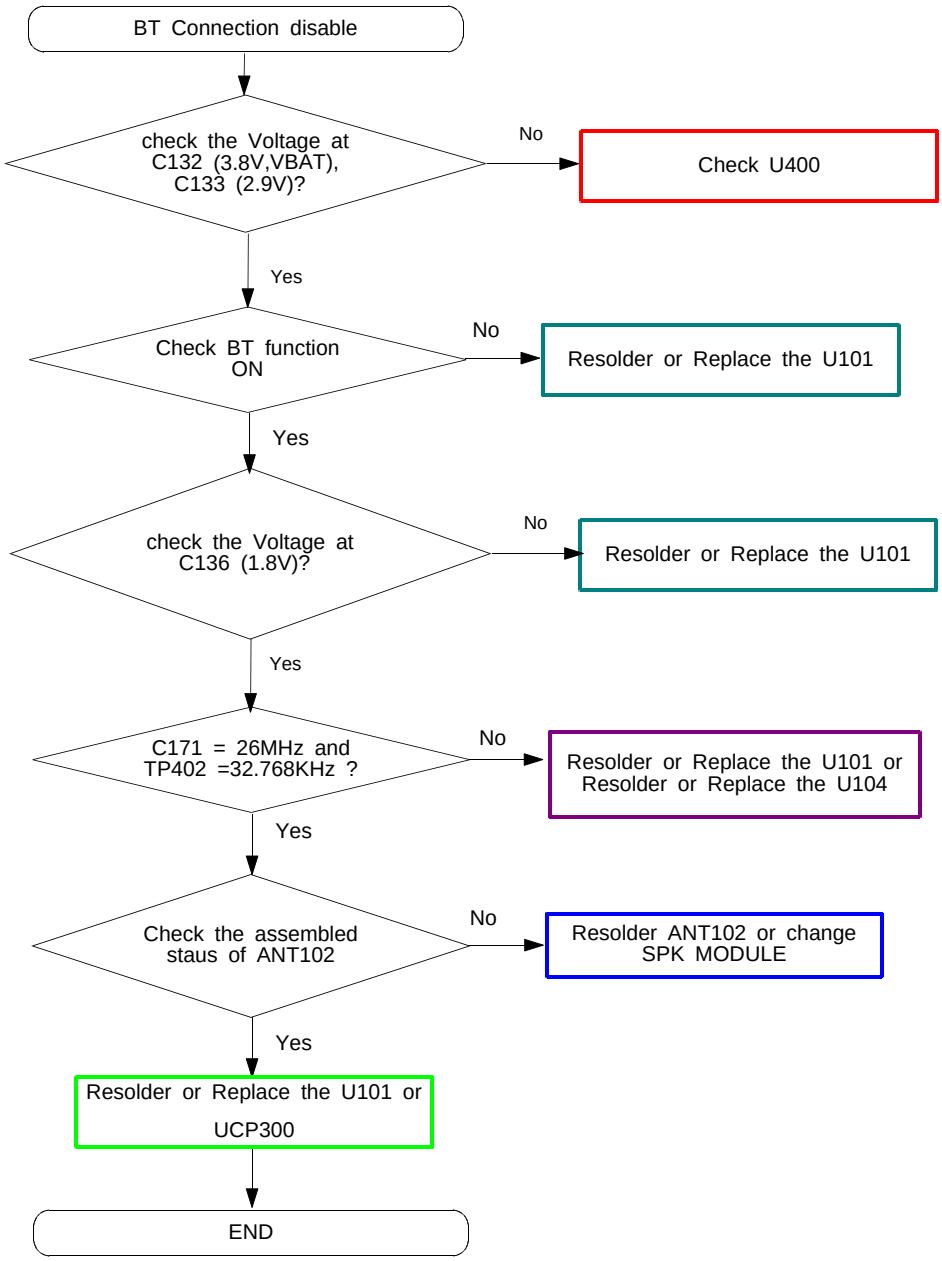
9-10. Bluetooth Part



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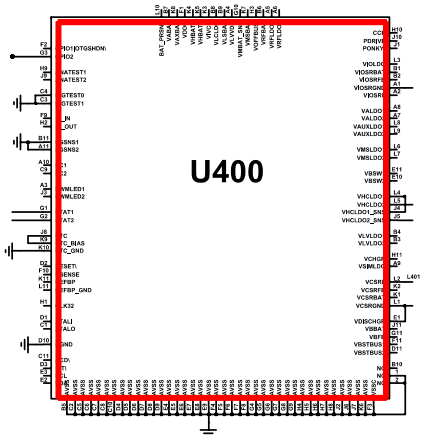

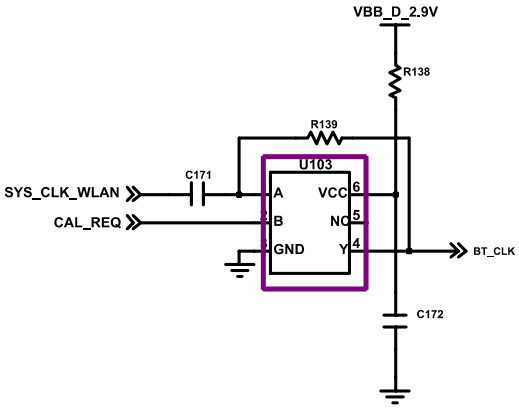

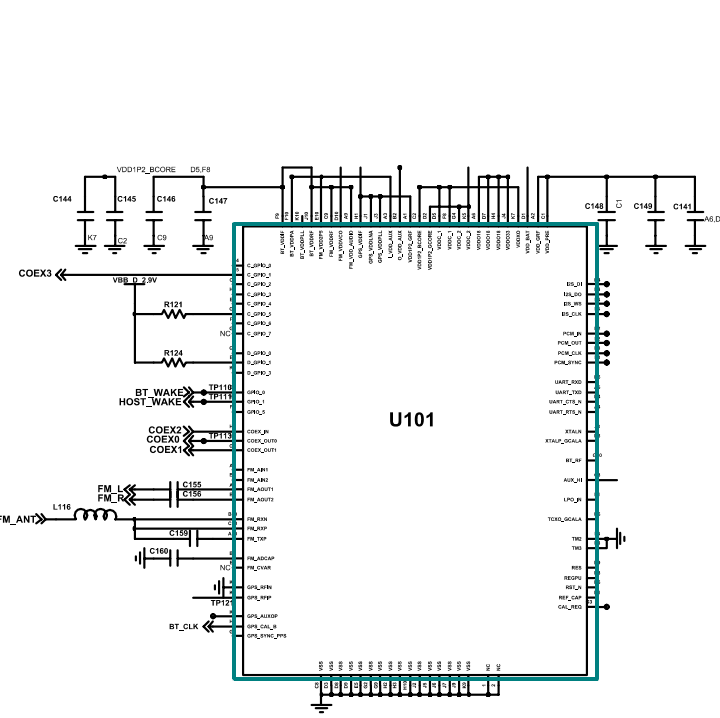

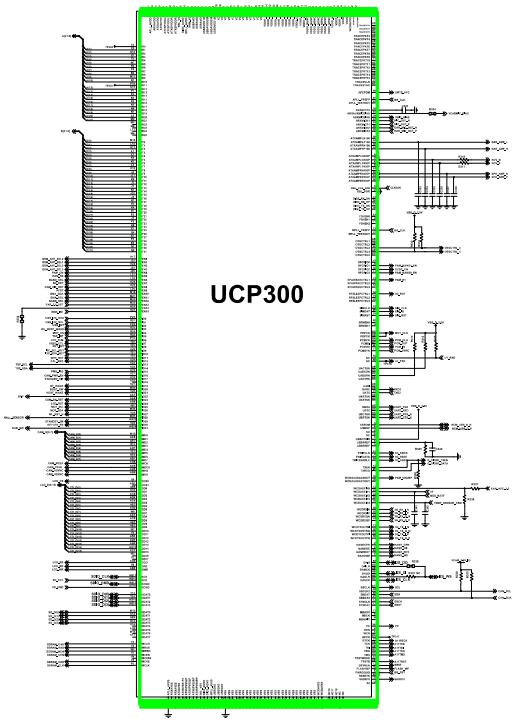

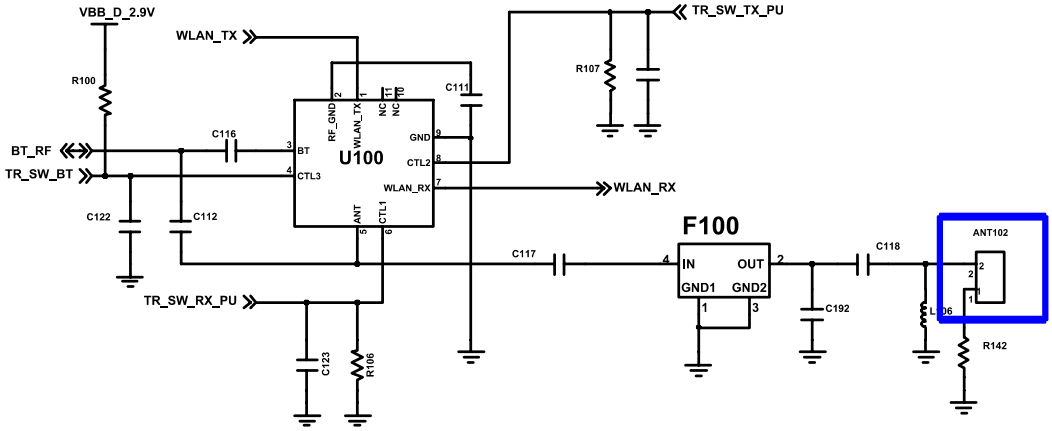

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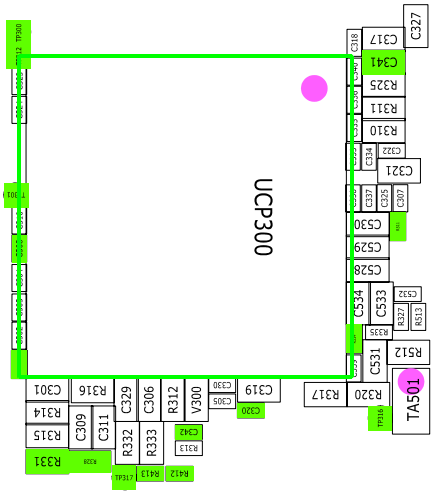

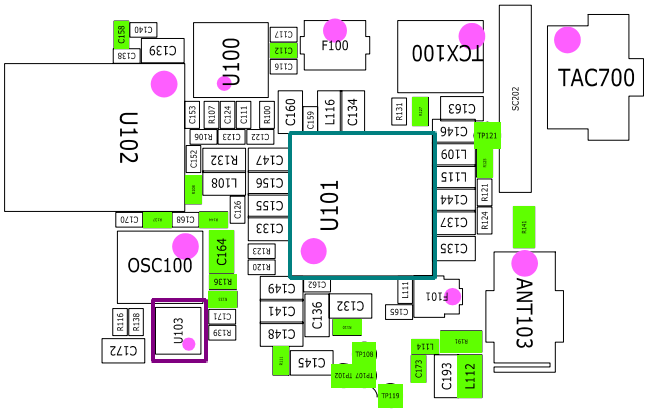

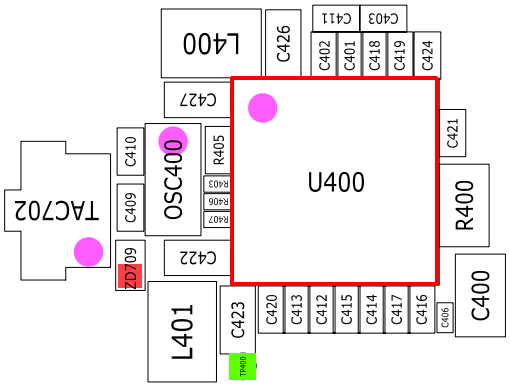

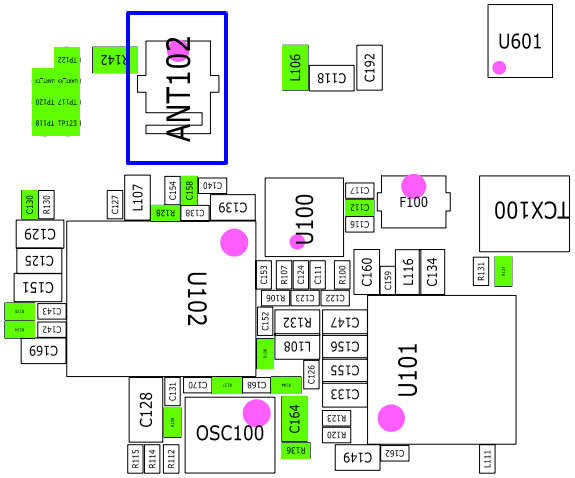

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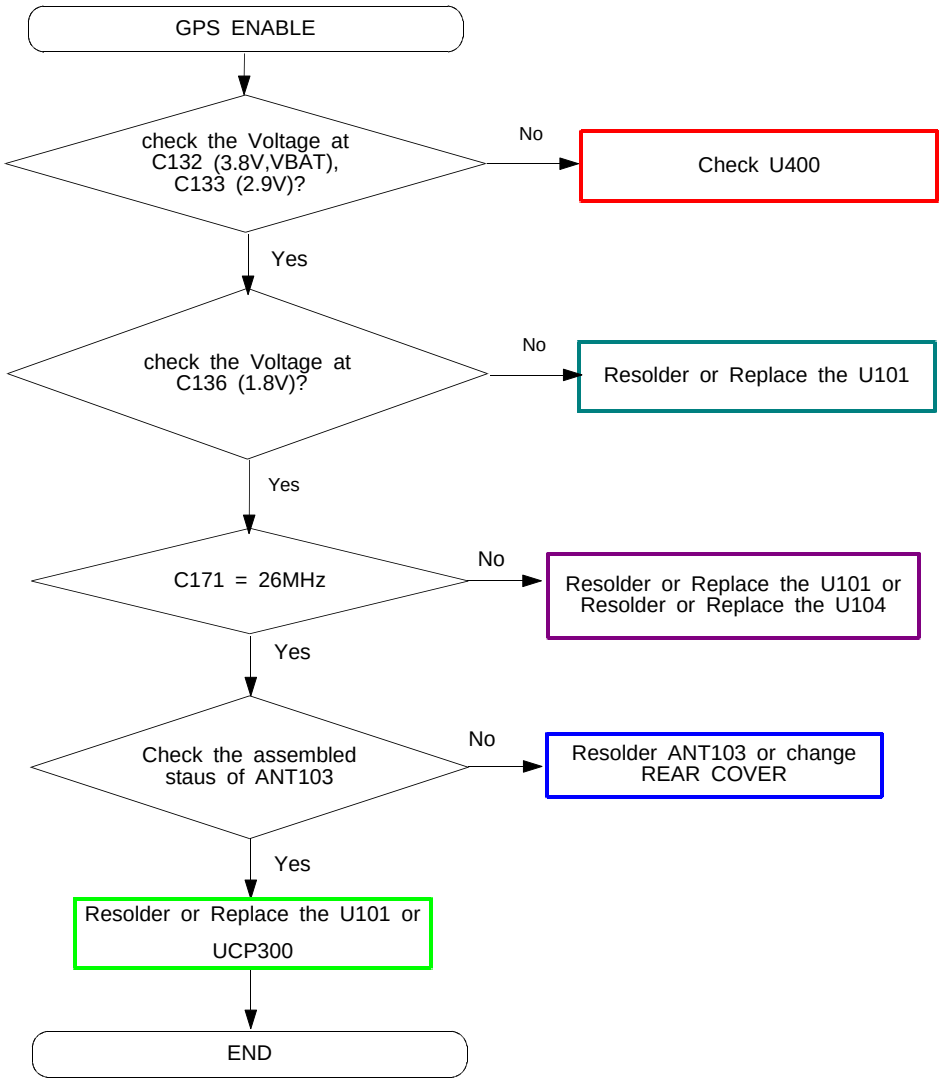
9-11. GPS Part



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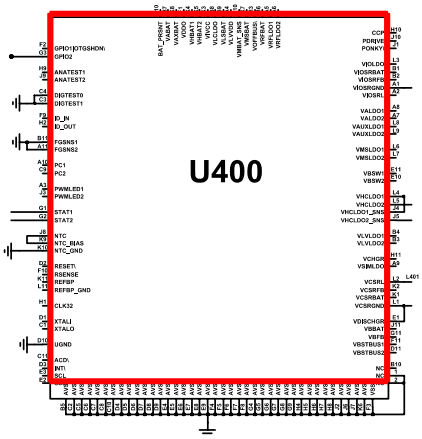

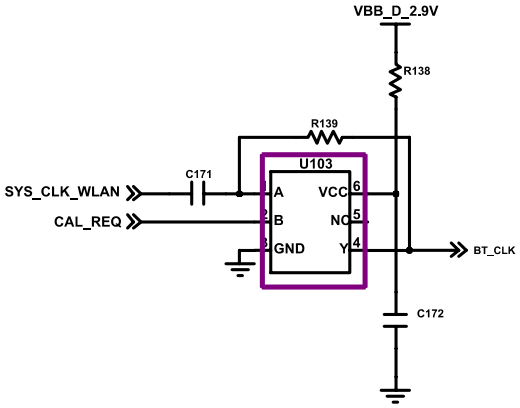

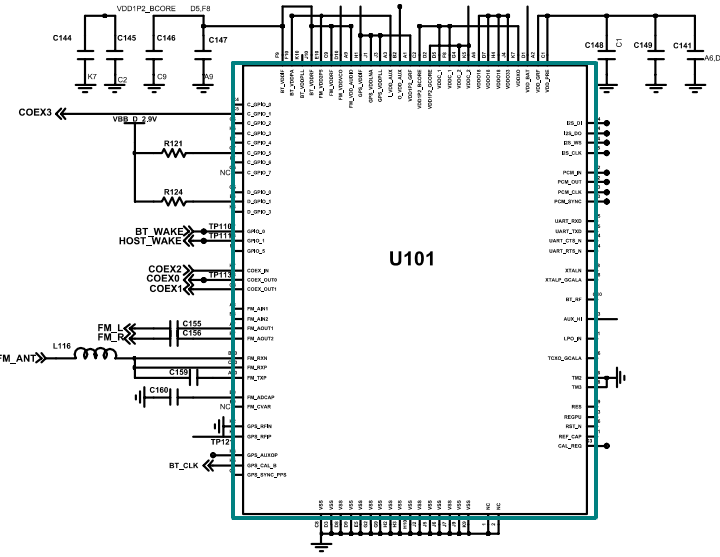

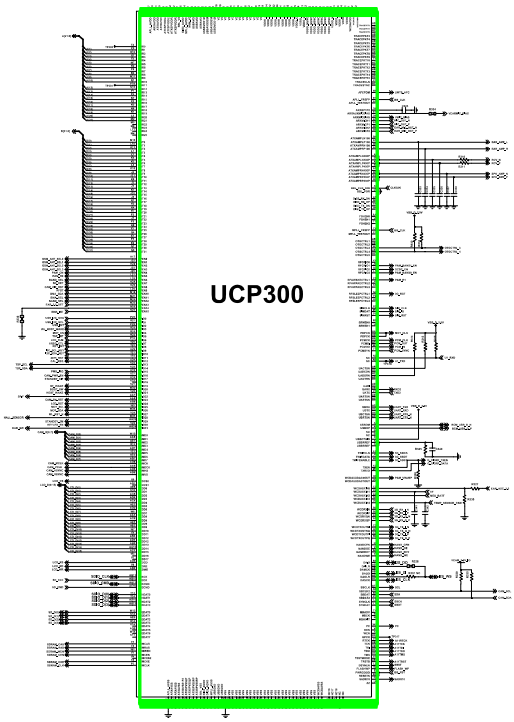

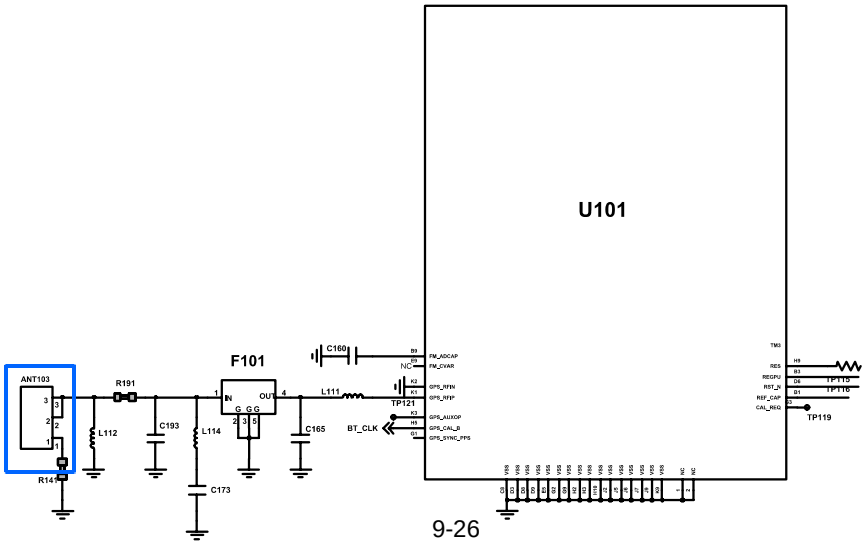

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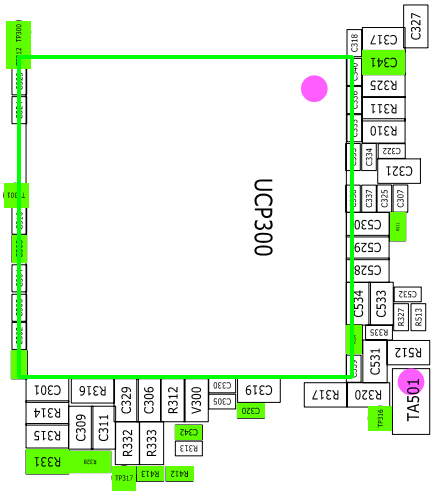

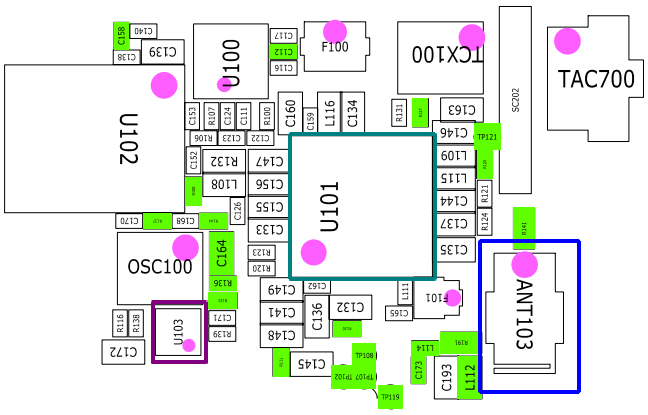

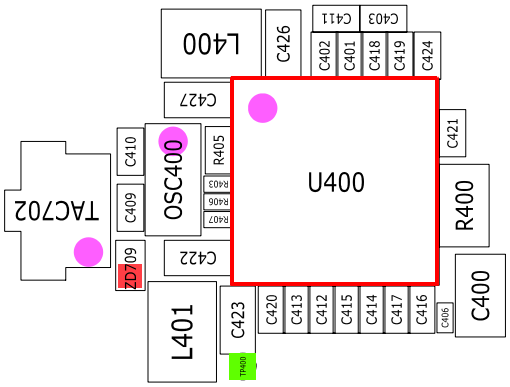

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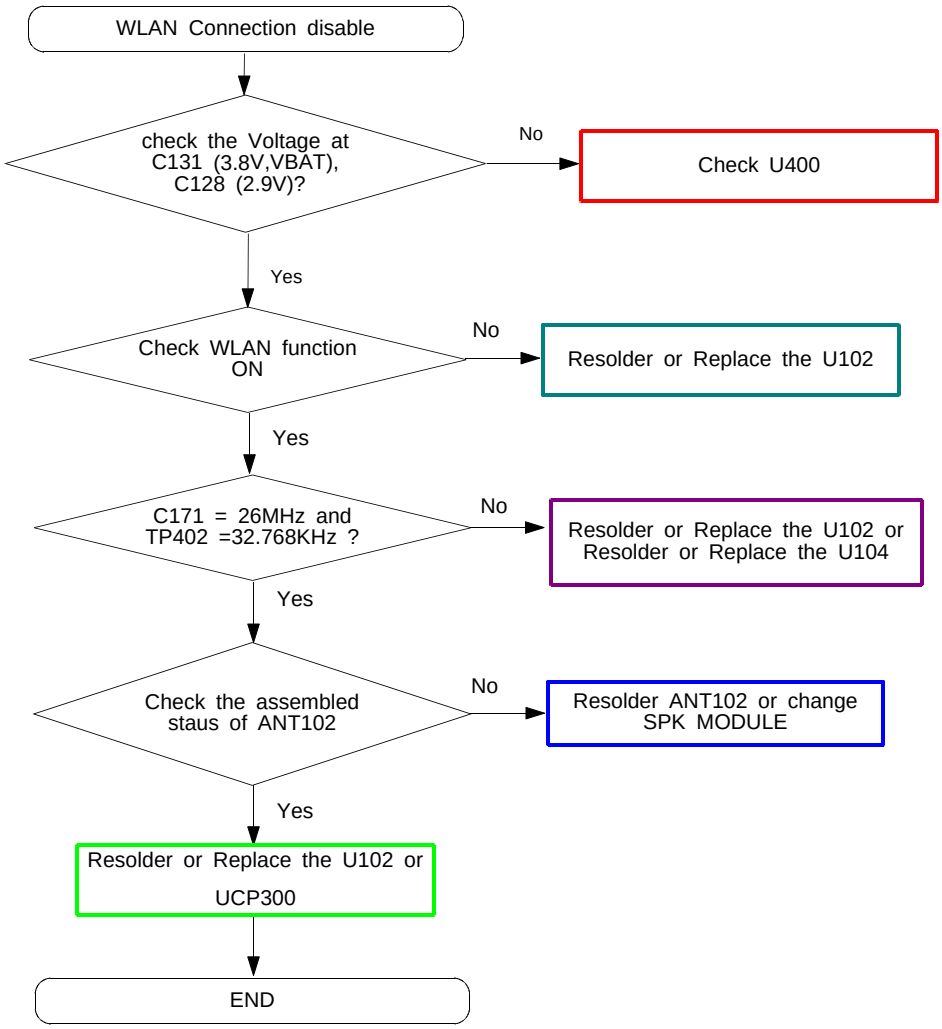
9-12. WLAN Part



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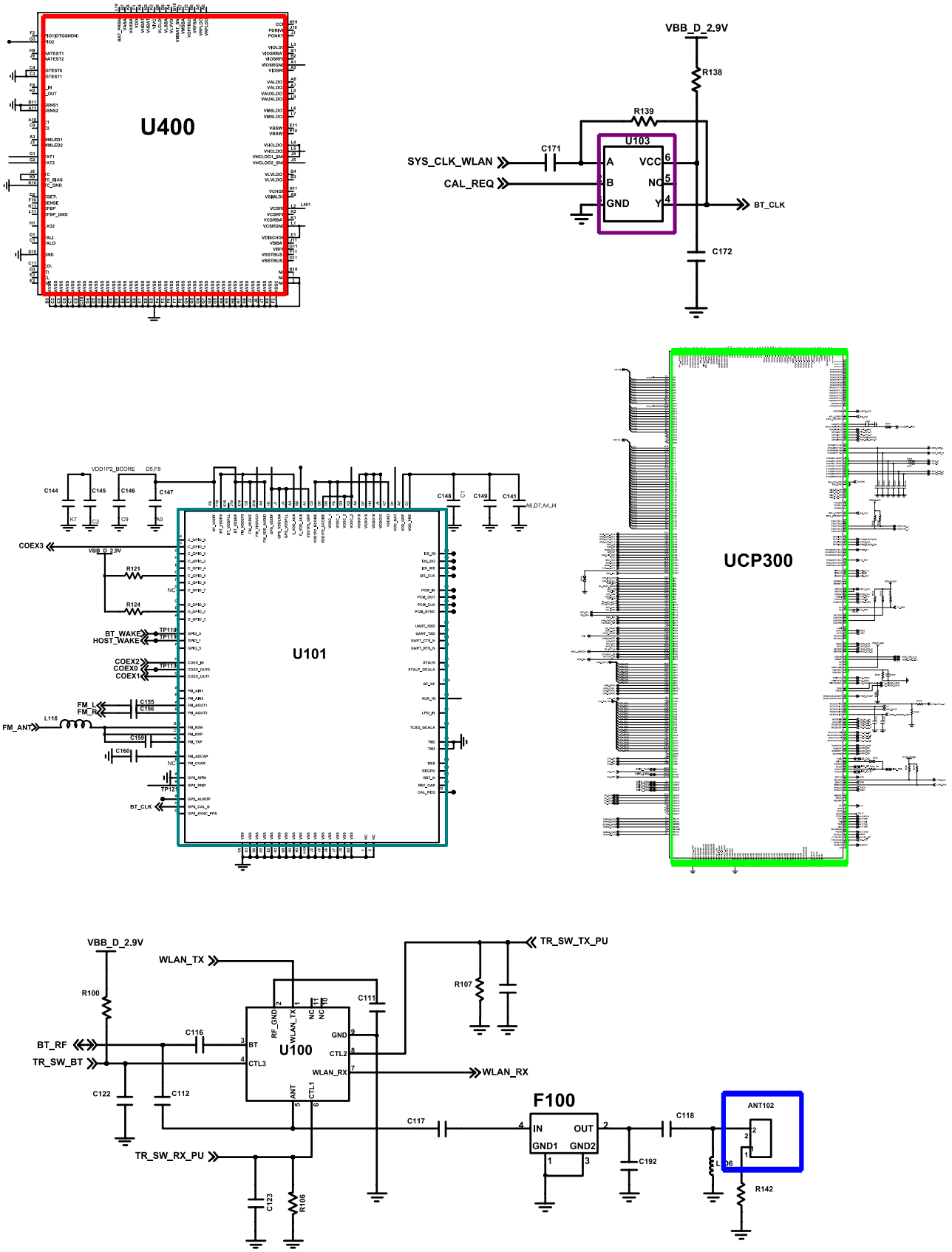

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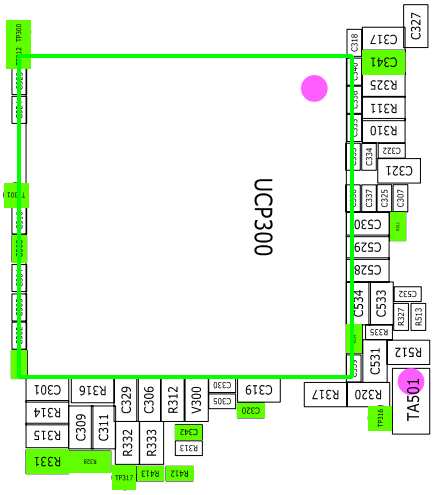

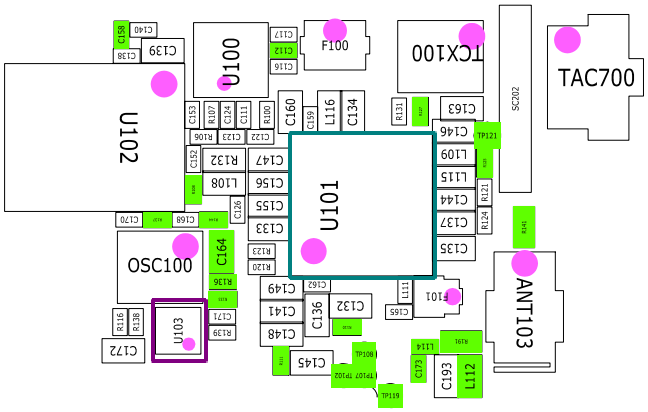

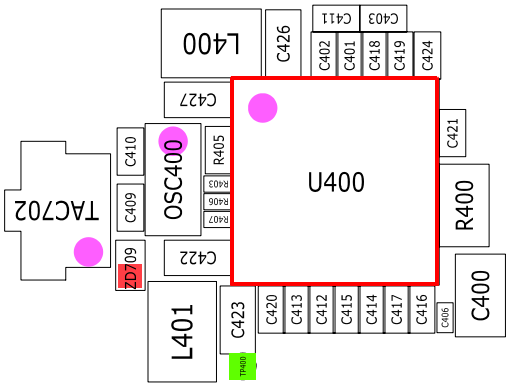

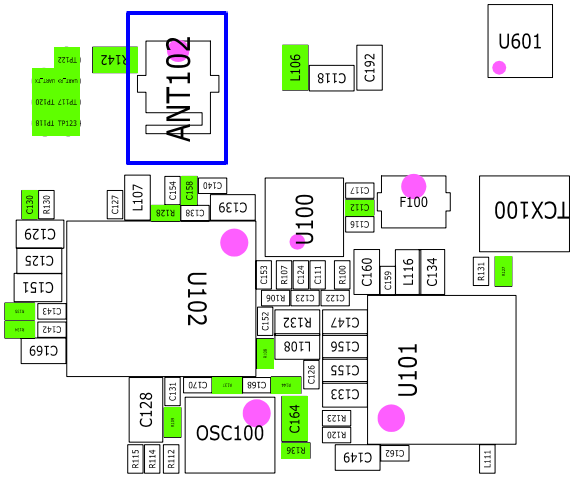

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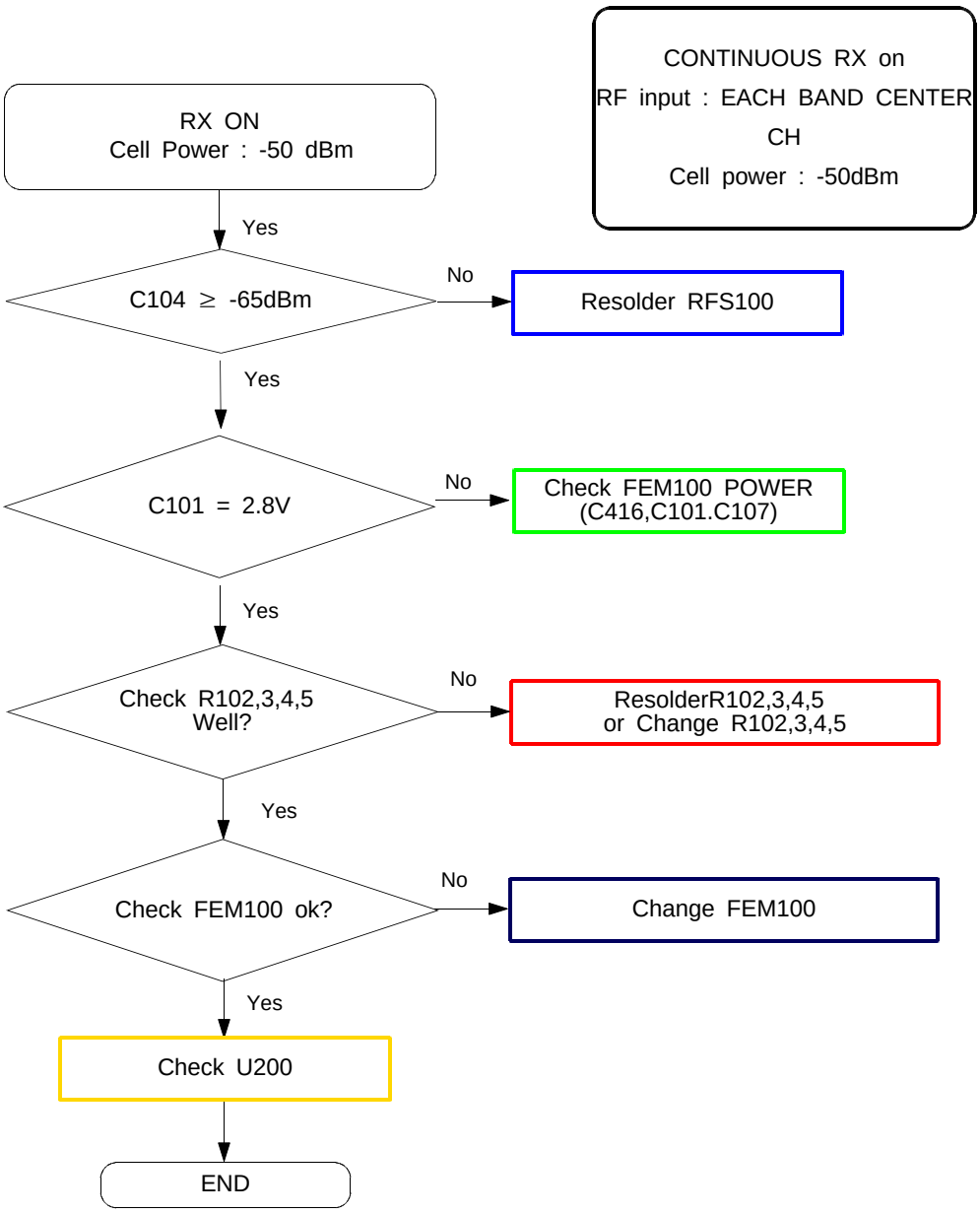
9-13. GSM/DPCS Receiver



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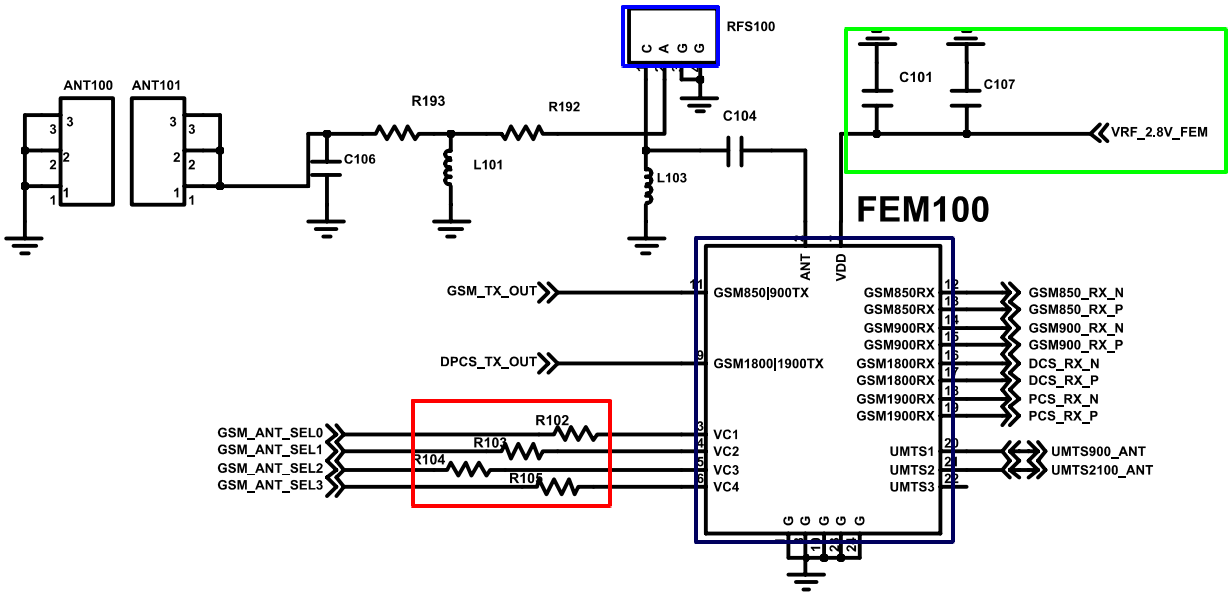

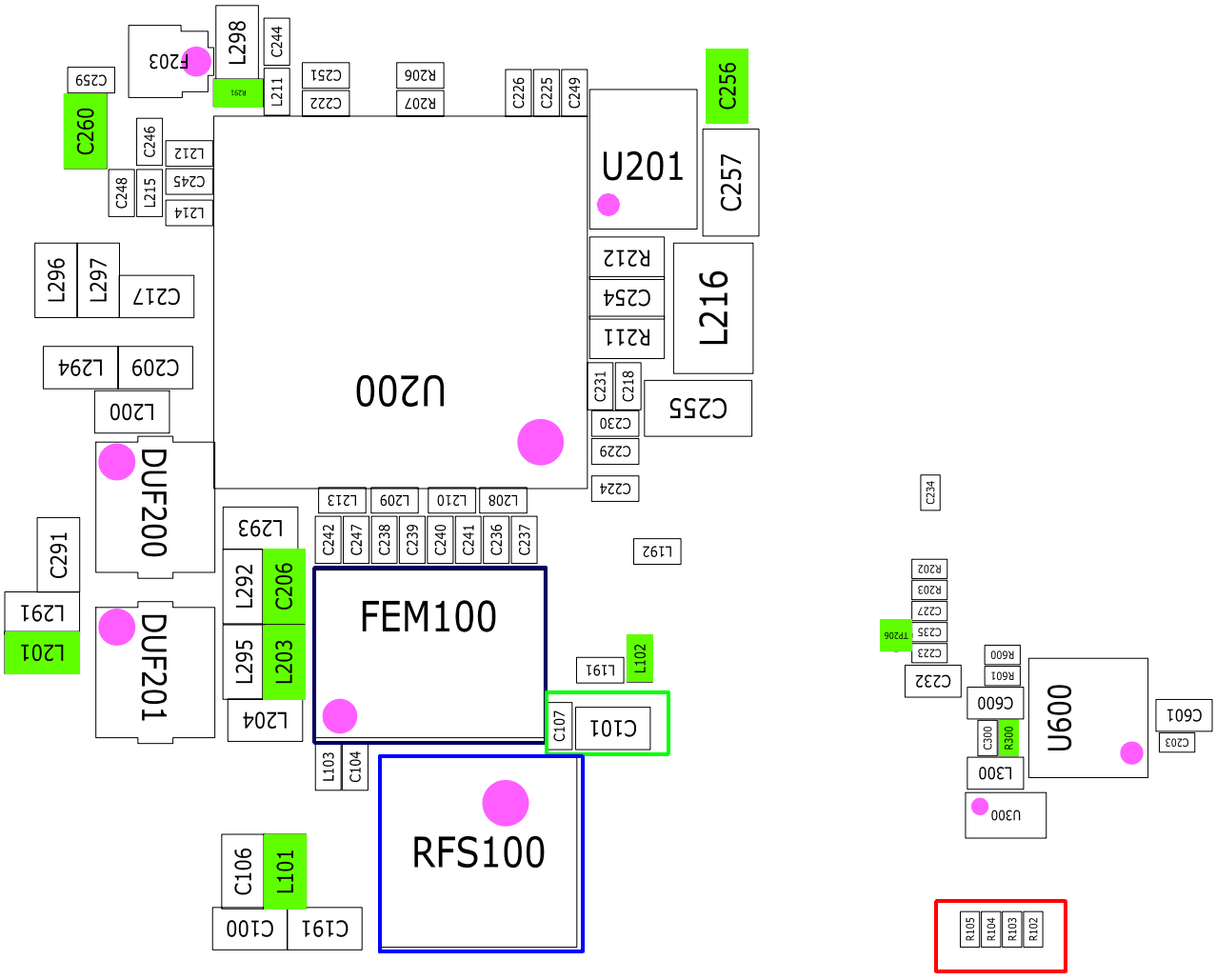

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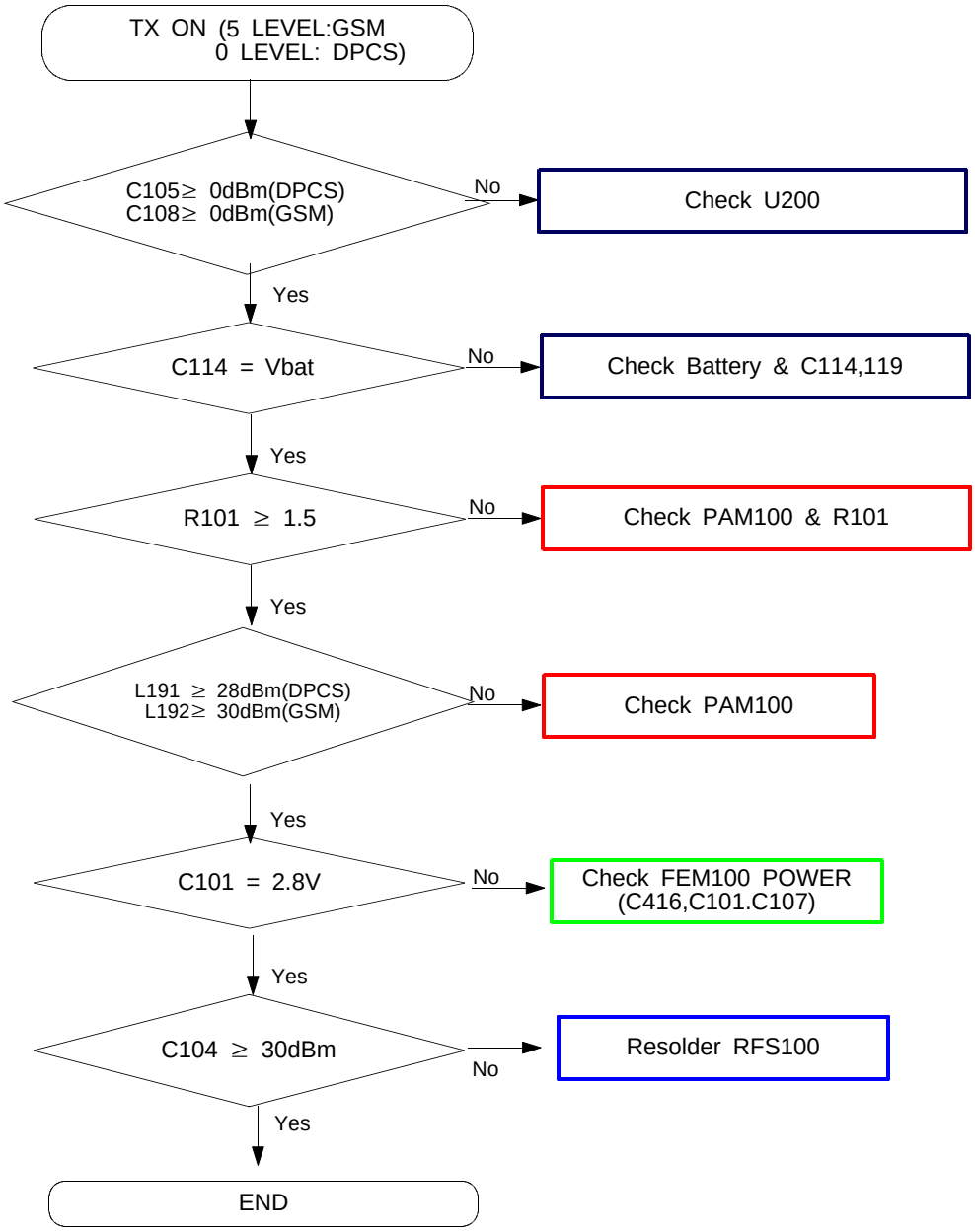
9-14 GSM/DPCS Transmitter



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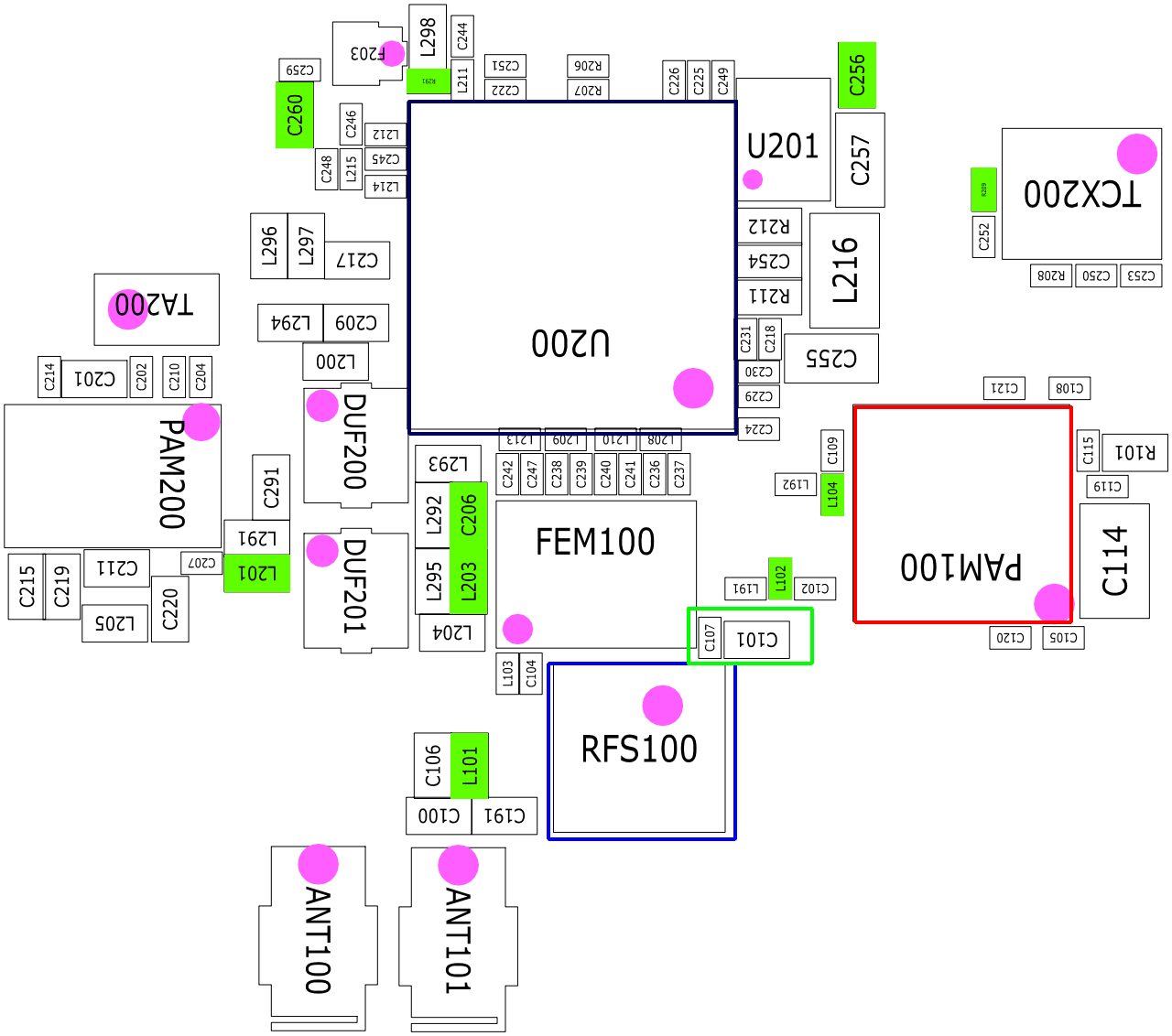

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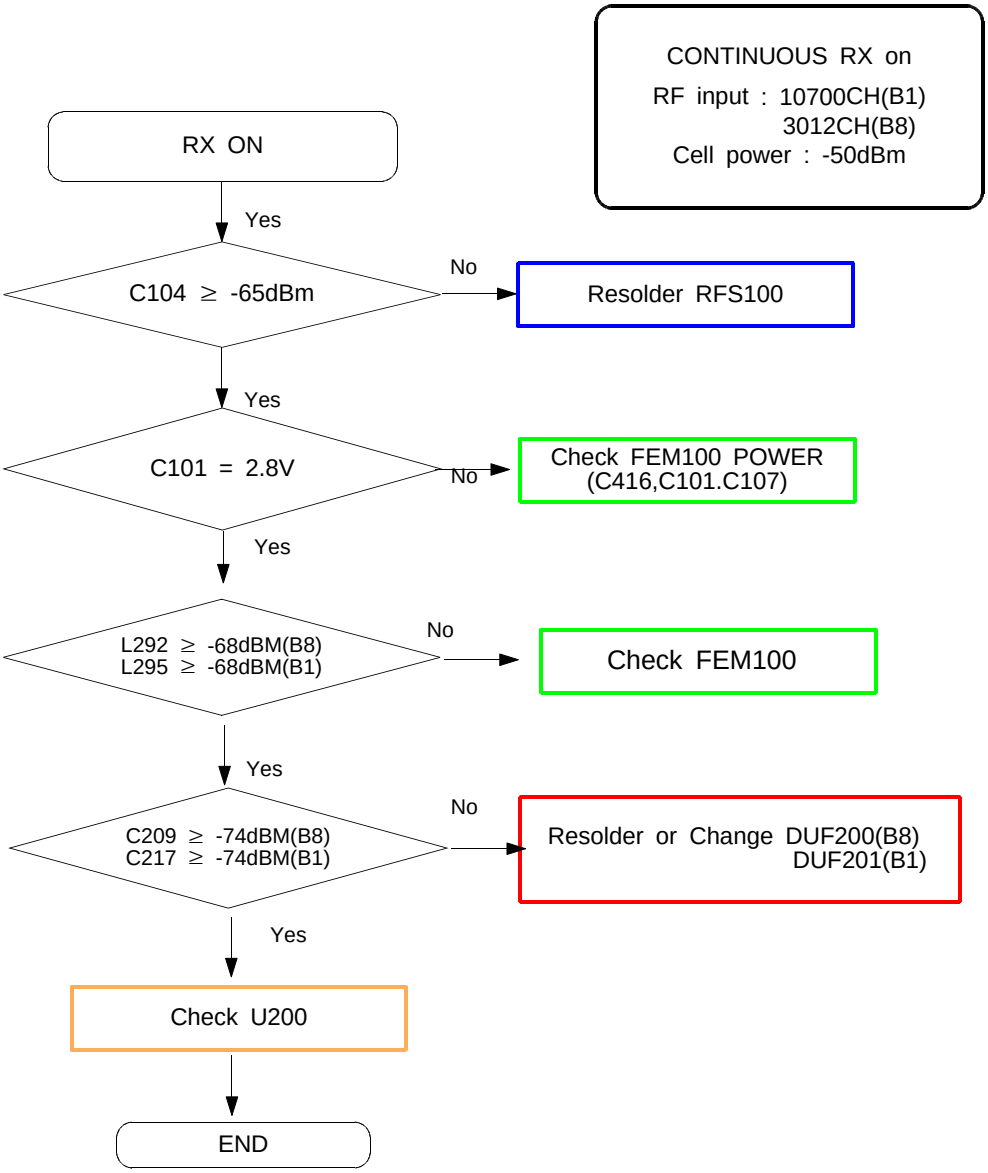
9-15. WCDMA Receiver



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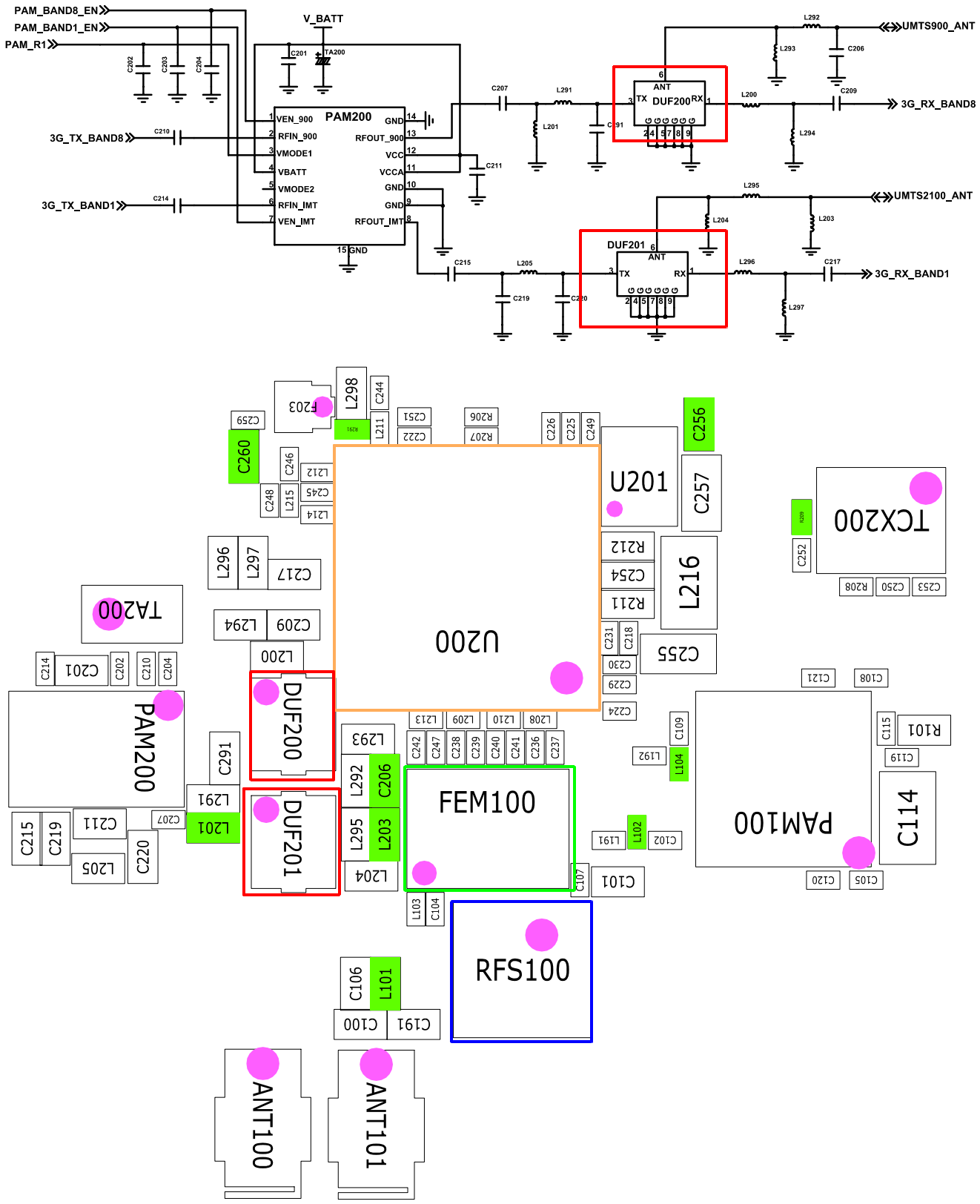

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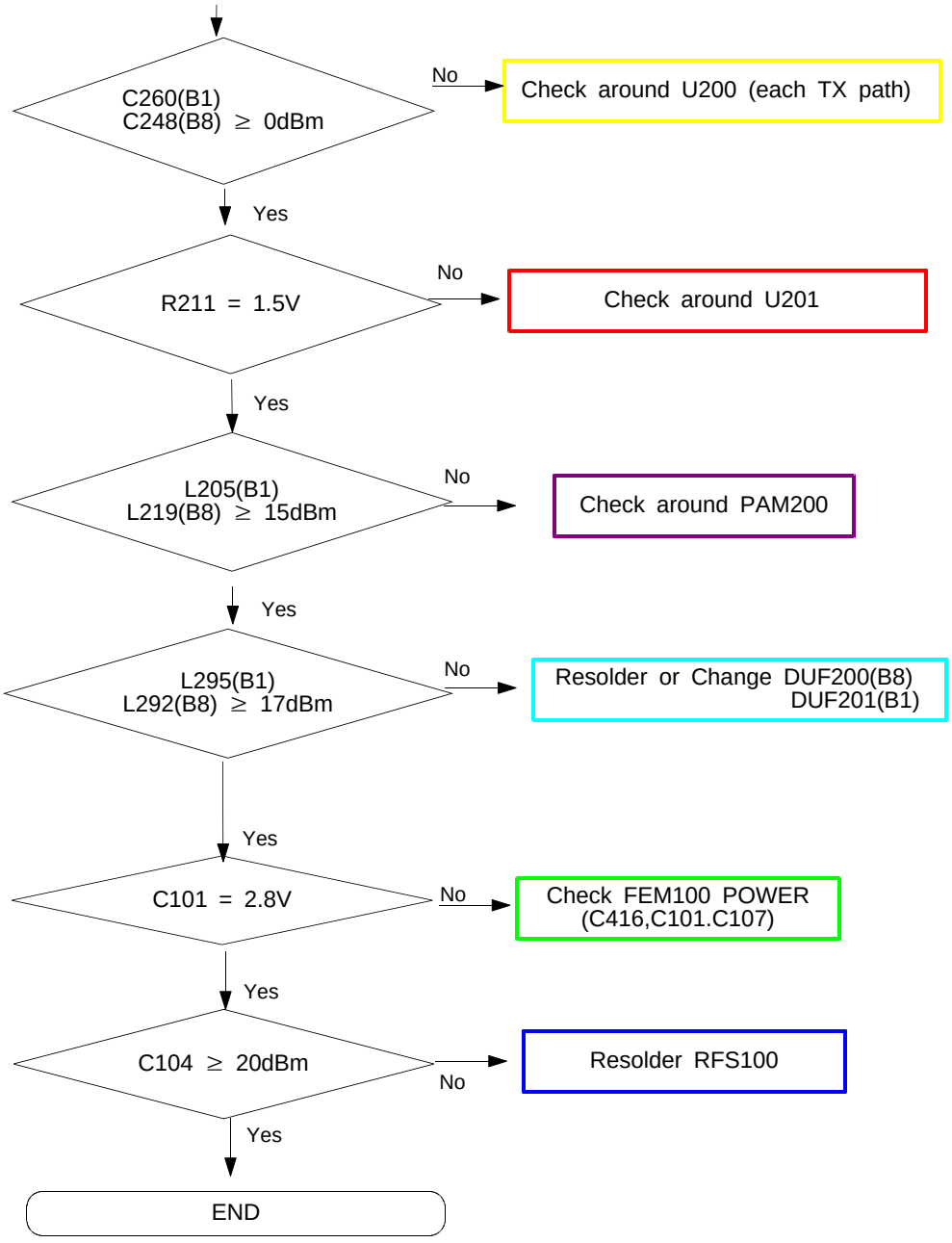
9-16. WCDMA Transmitter



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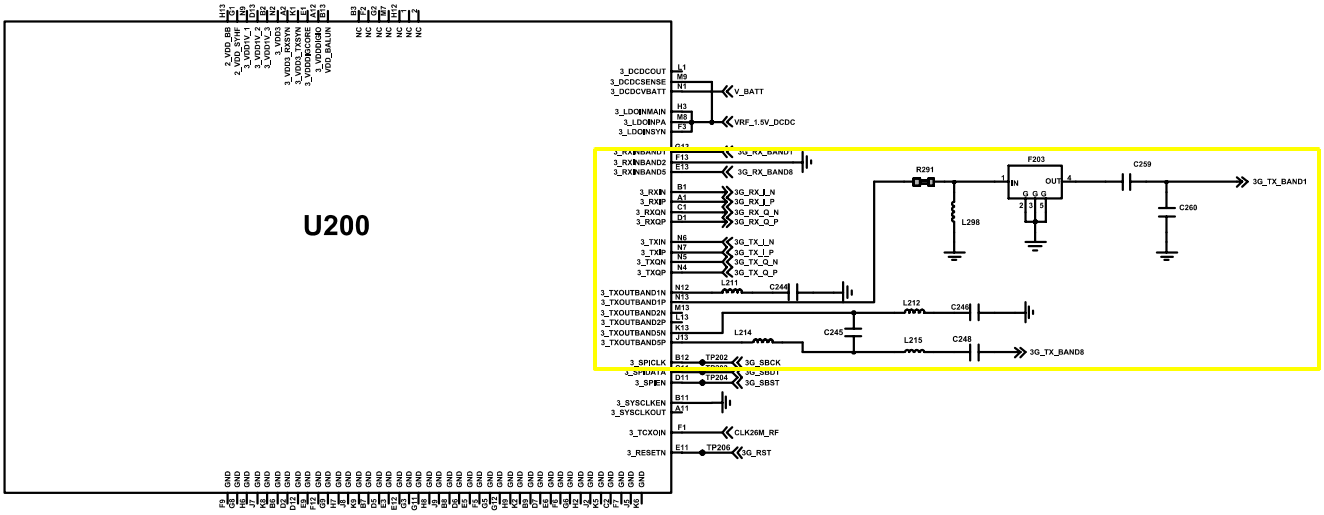

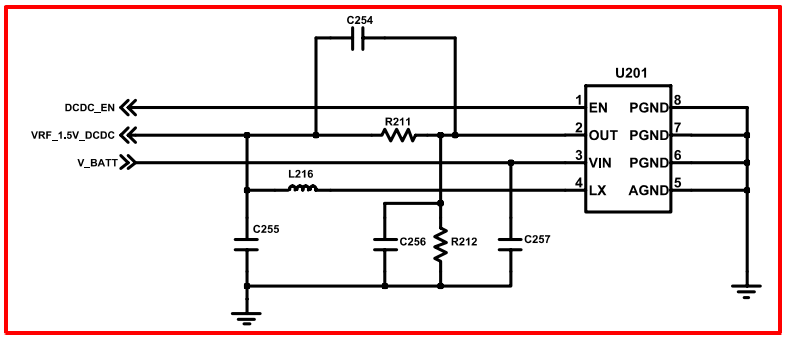

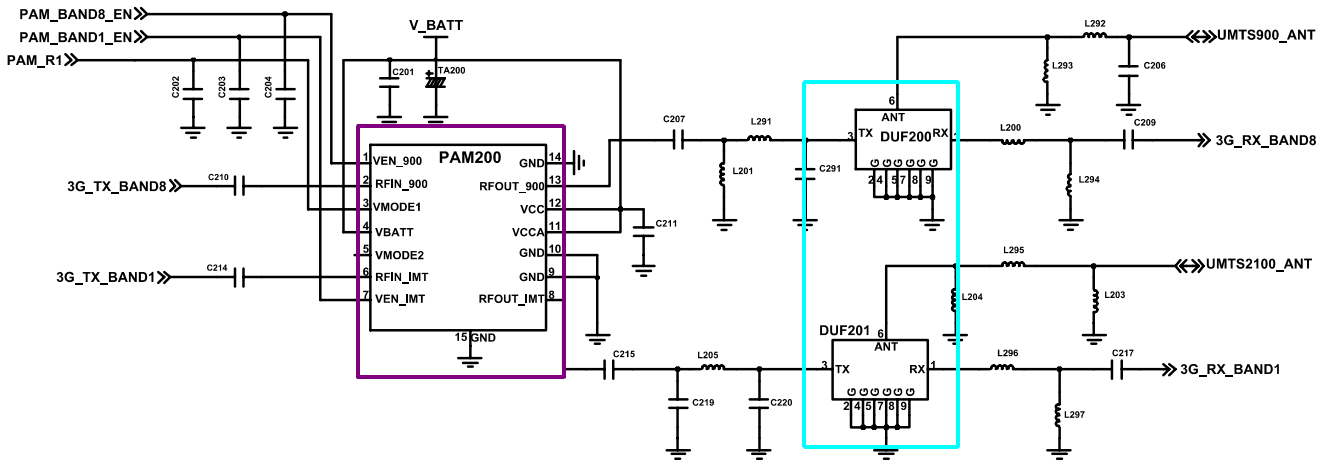

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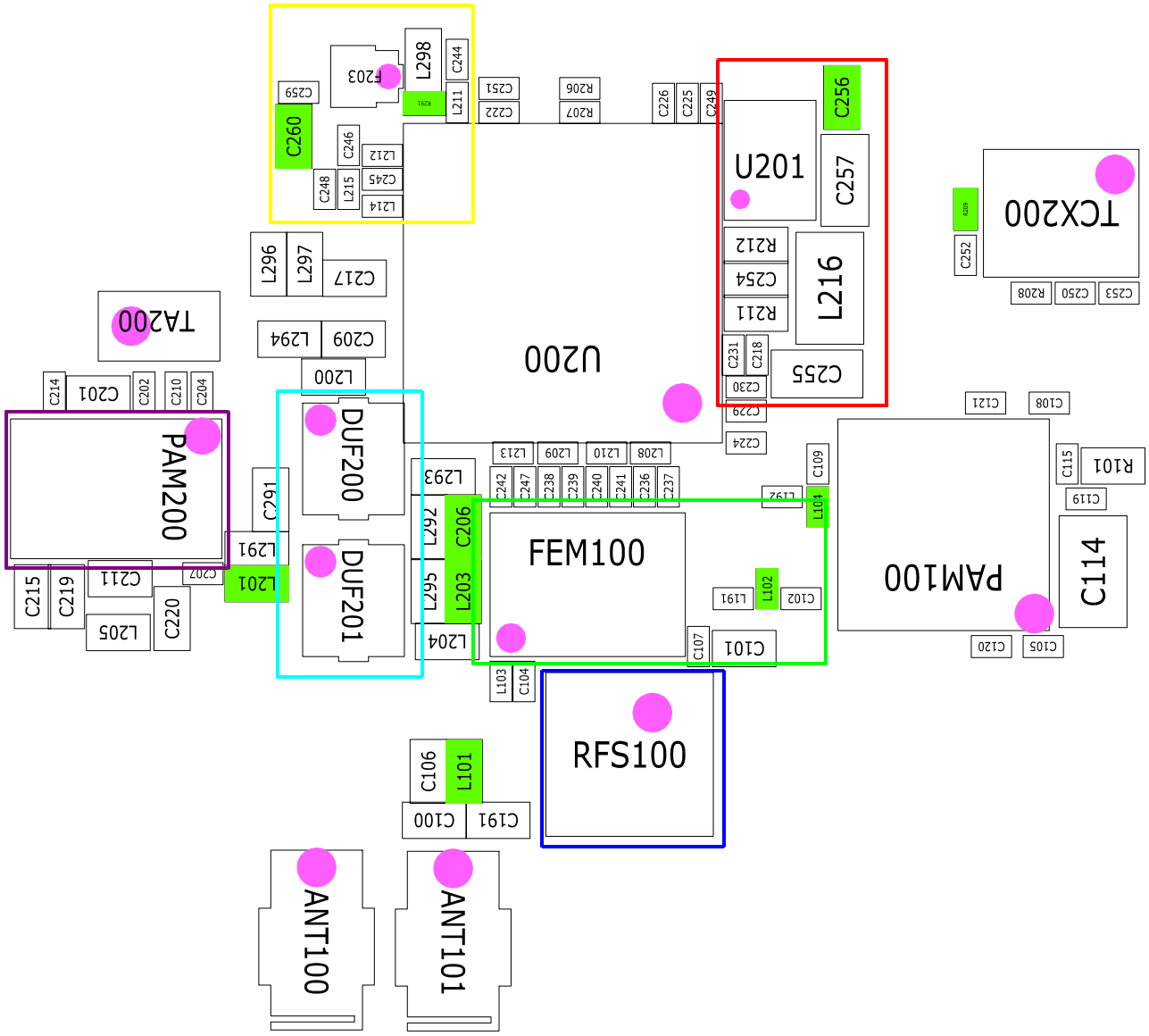

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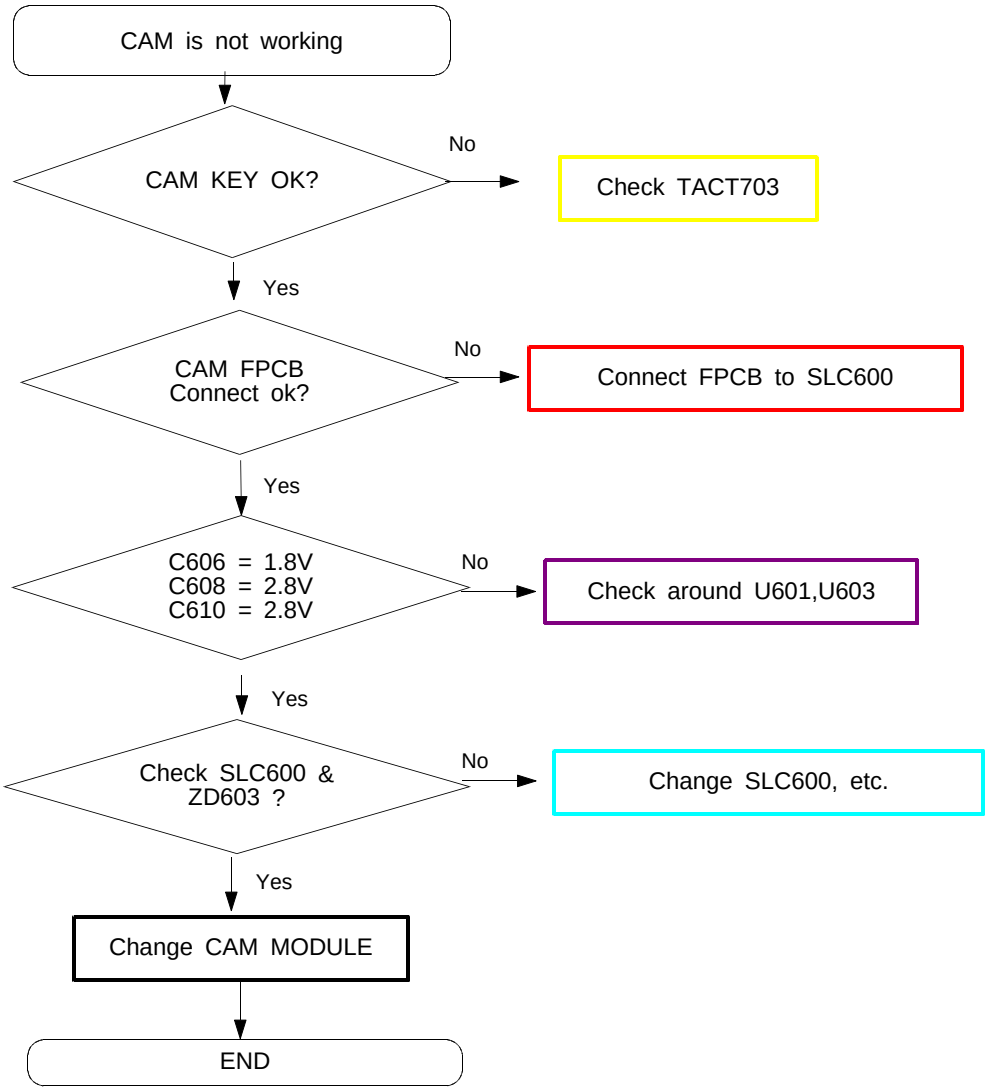
9-17. CAMERA



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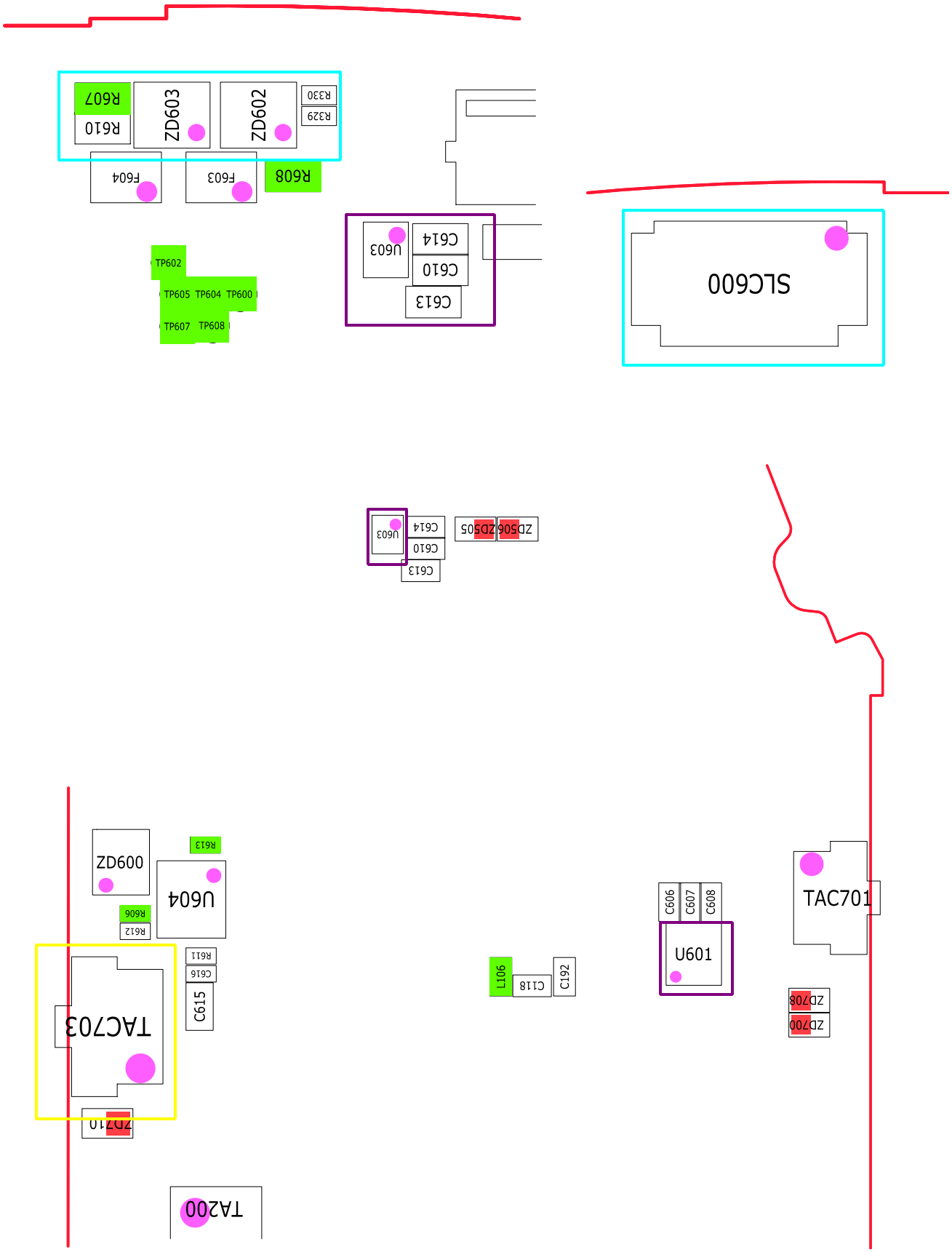

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7. Block Diagrams

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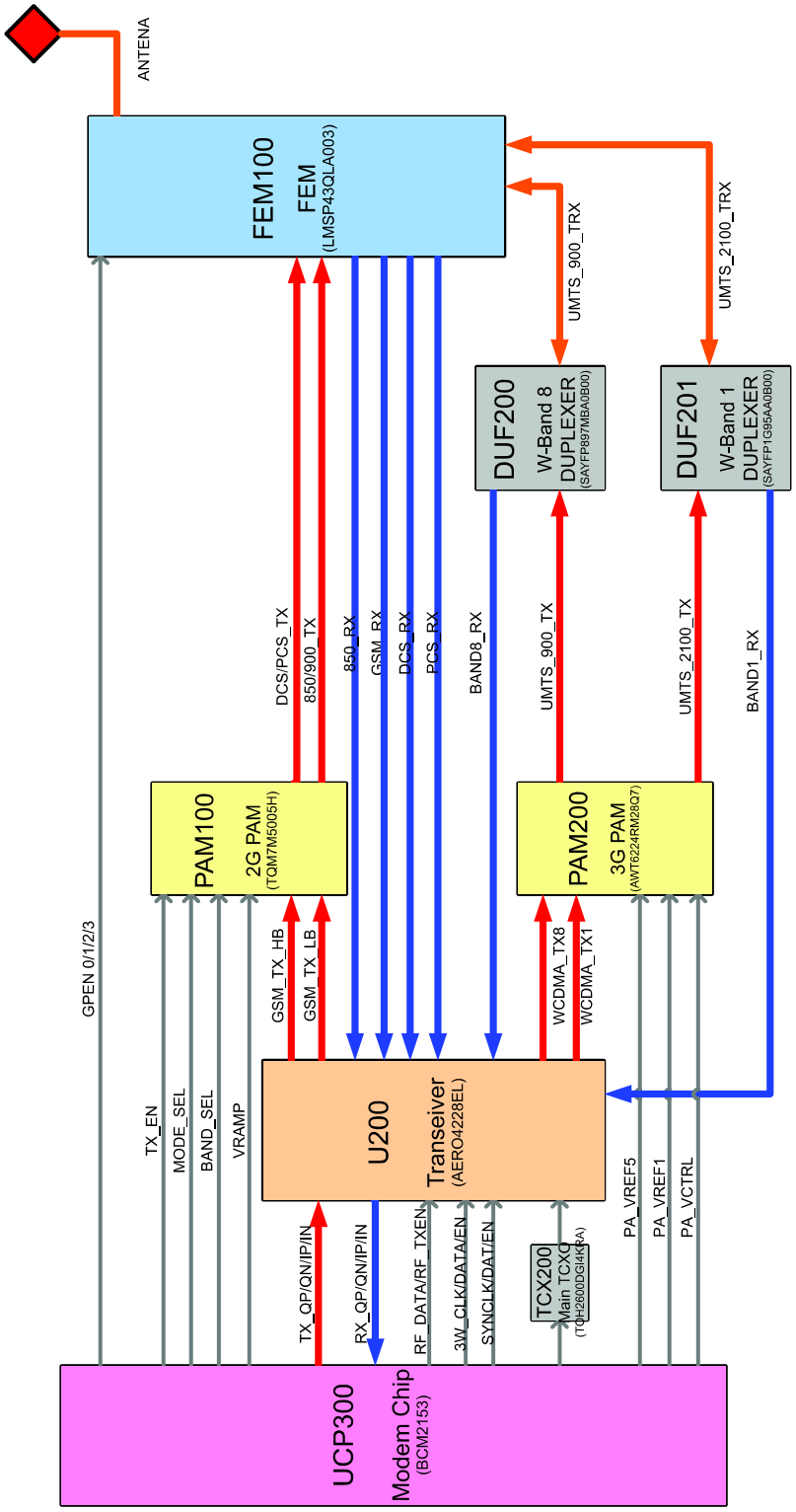

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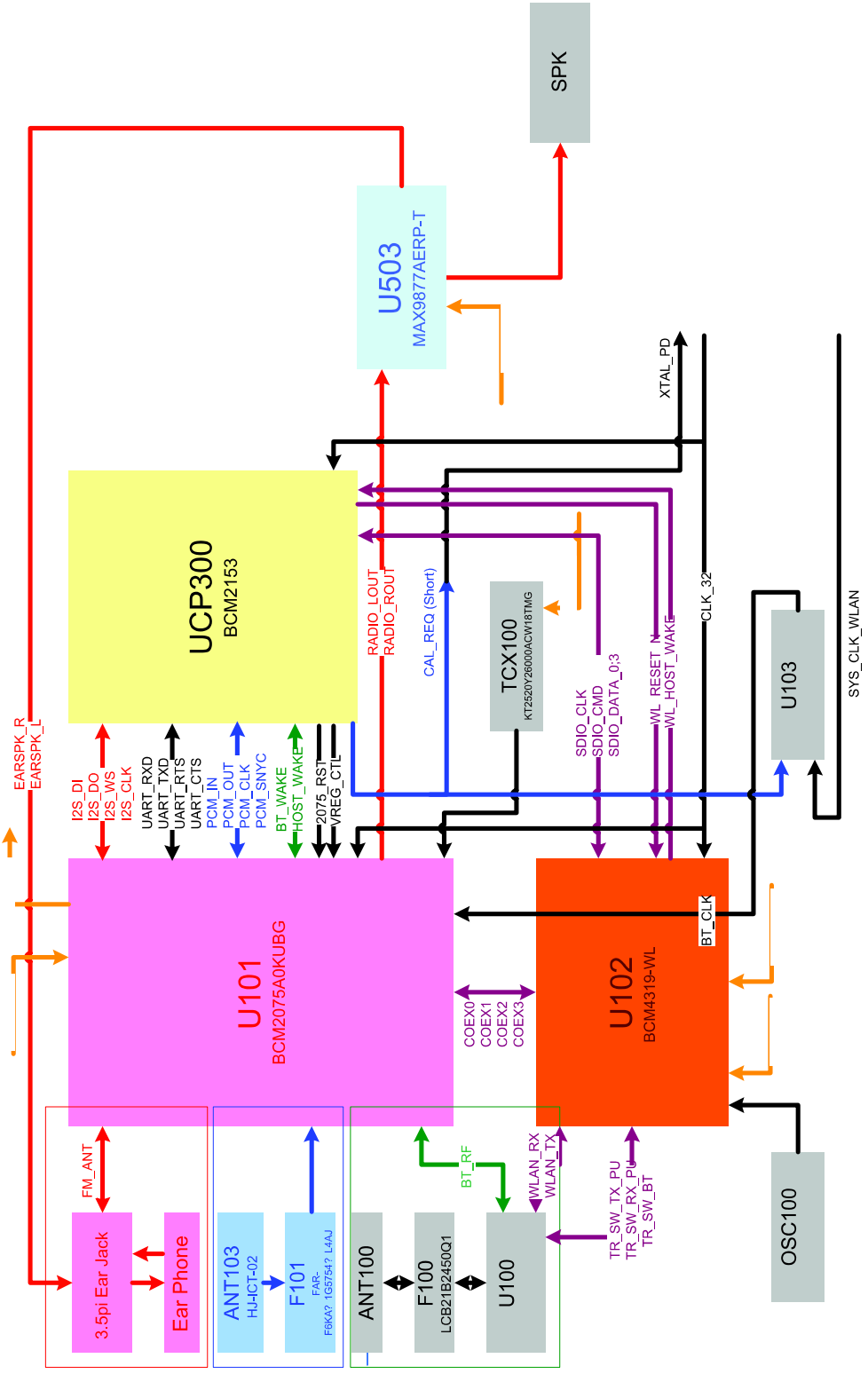
Bluetooth, FM RADIO, GPS, WLAN Block



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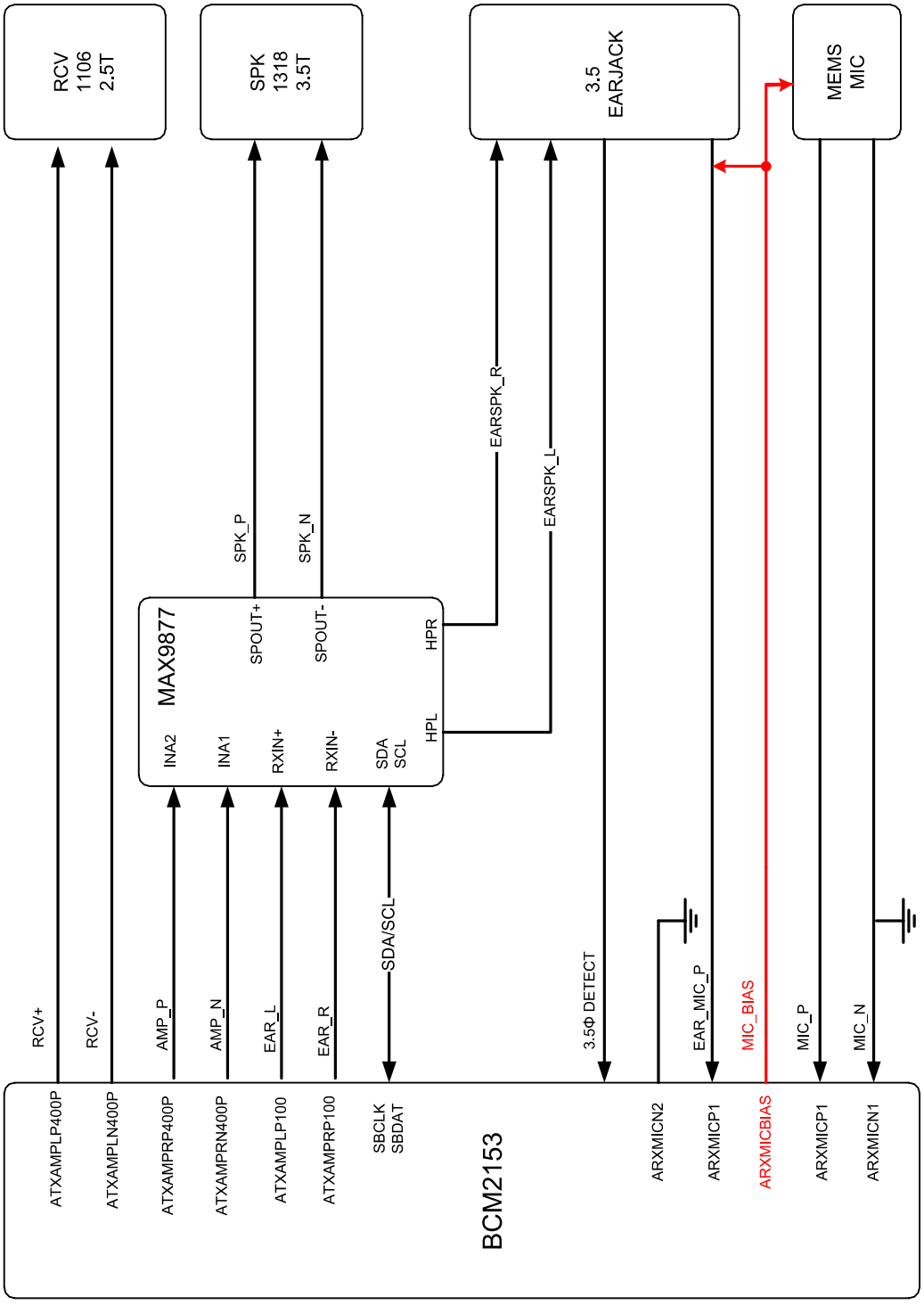
Audio Block



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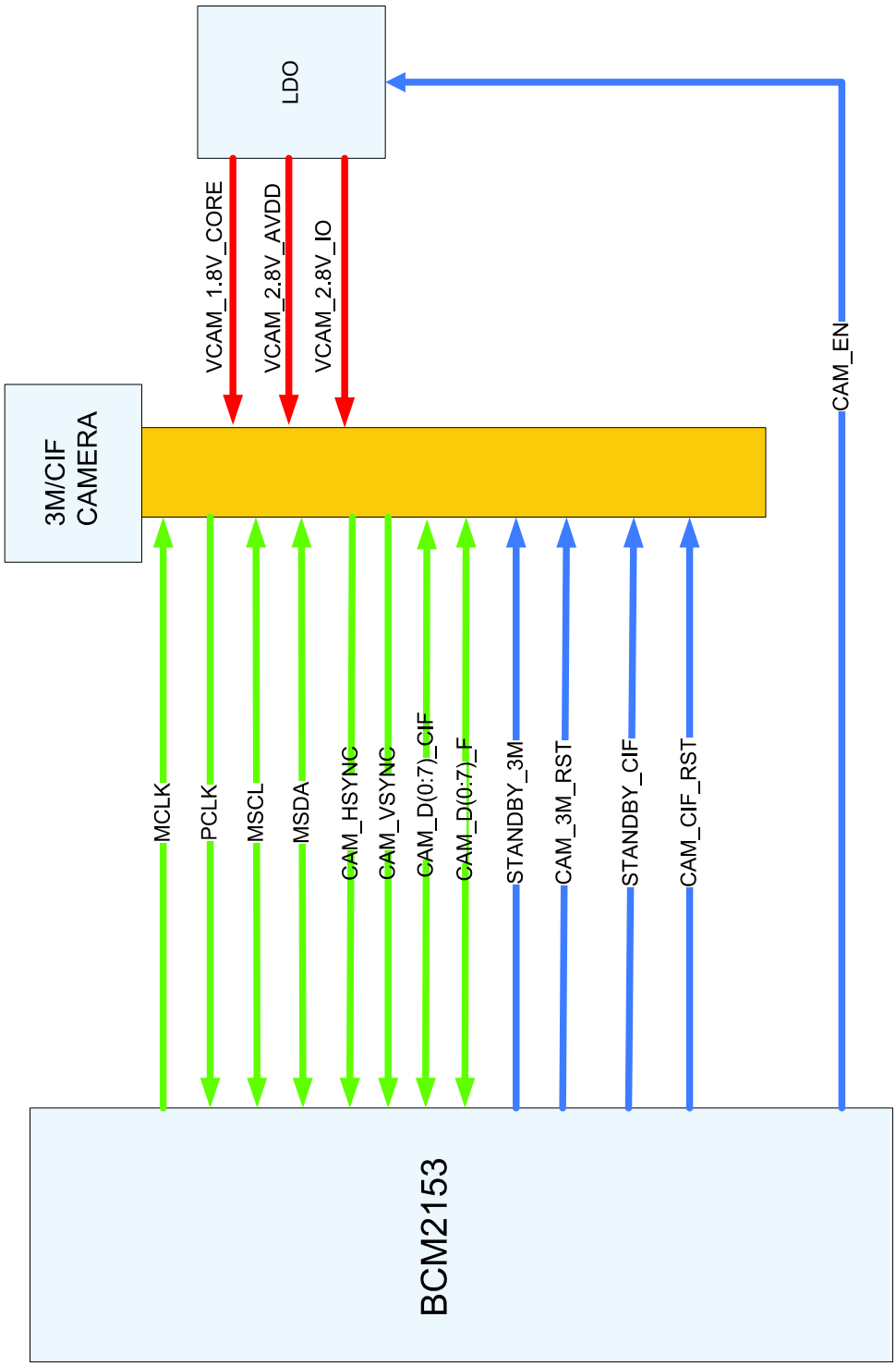
Camera Block



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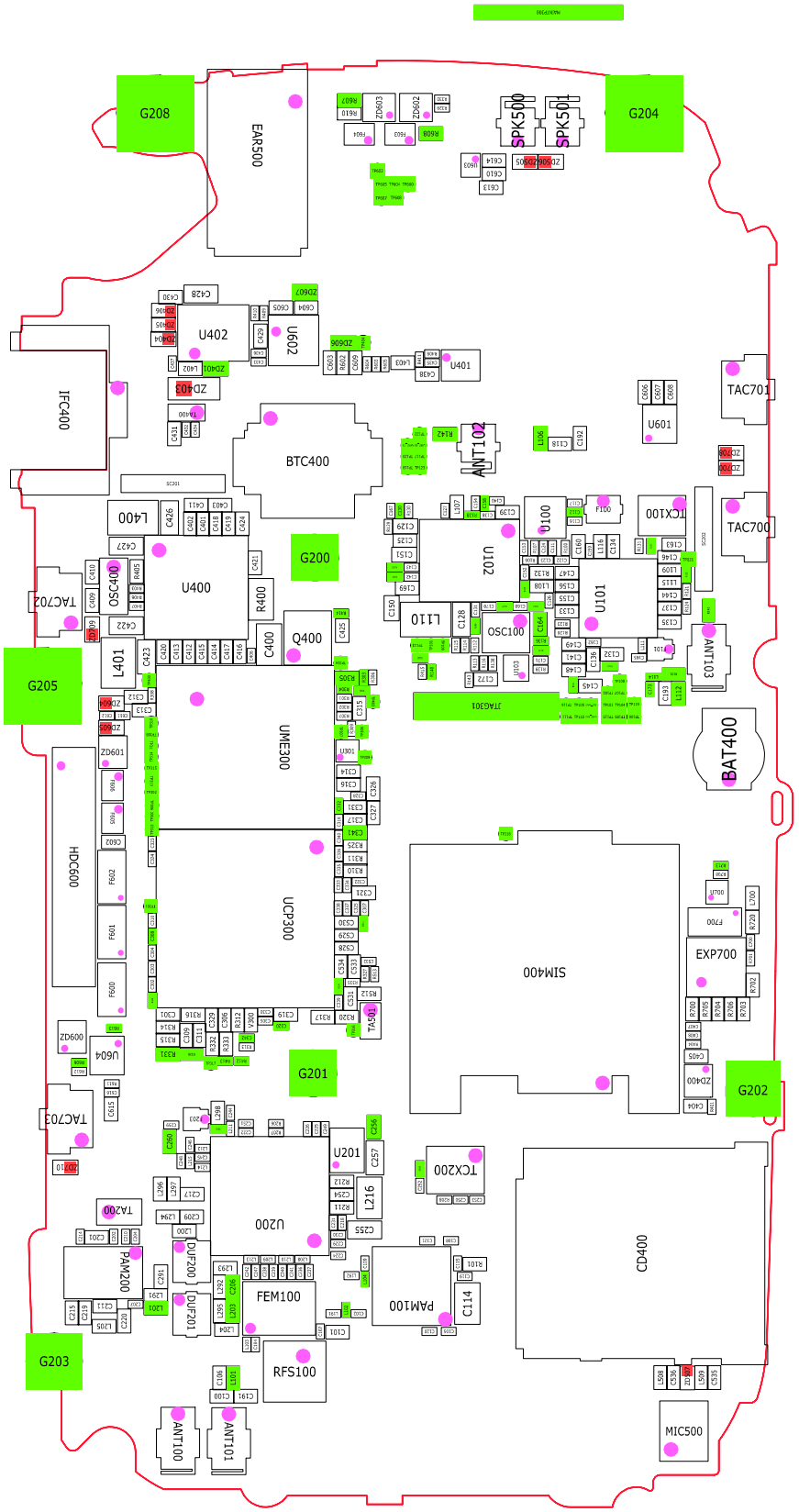
8. PCB Diagrams



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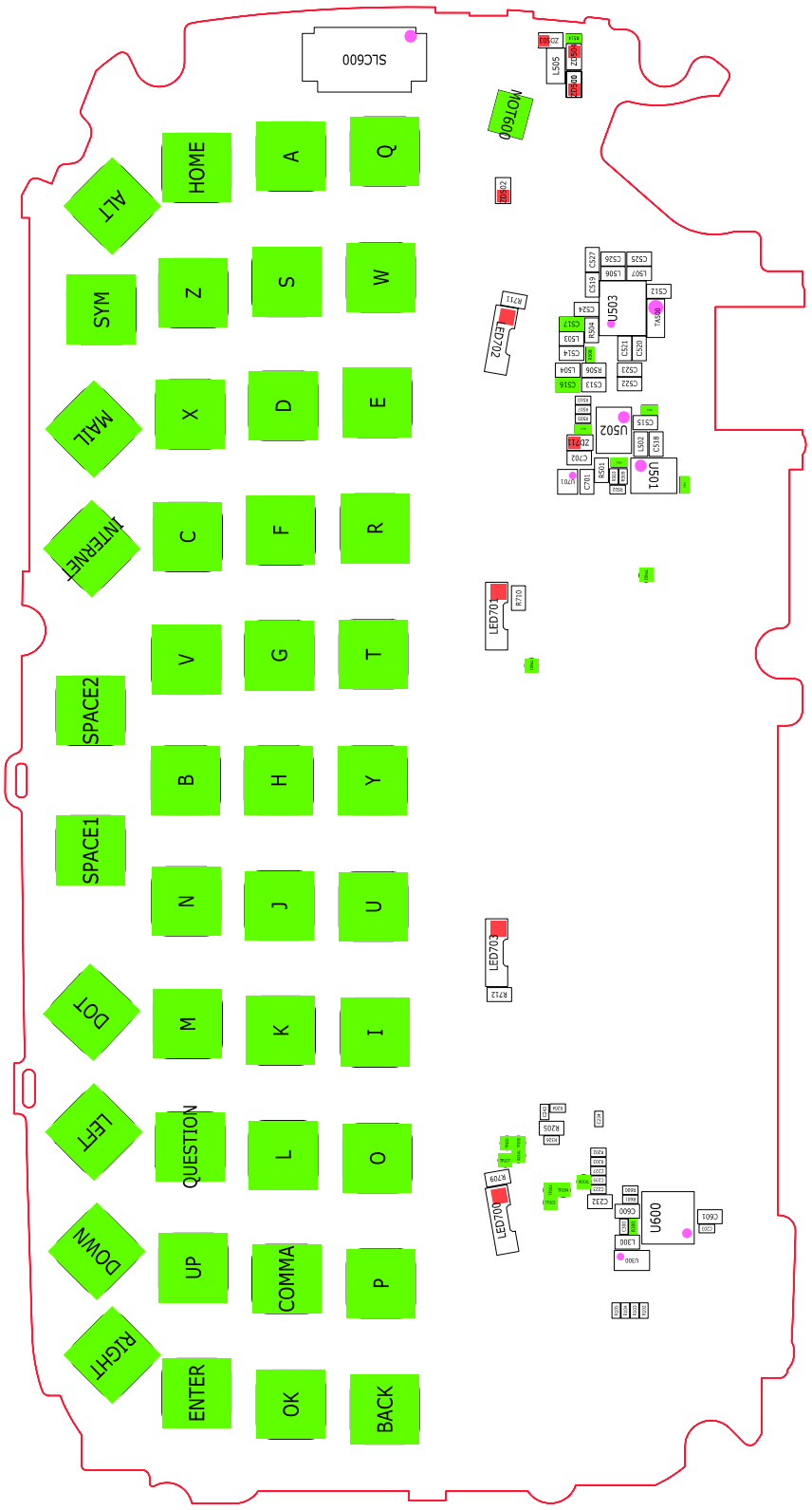

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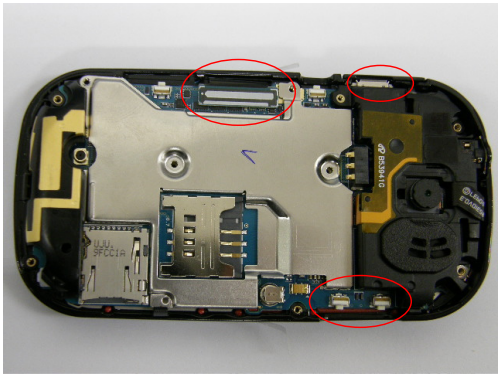
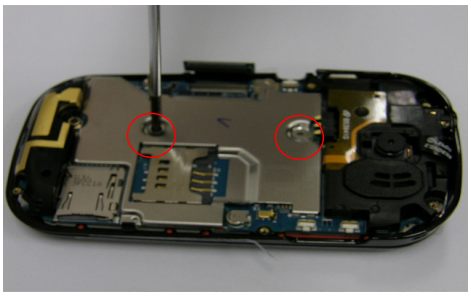
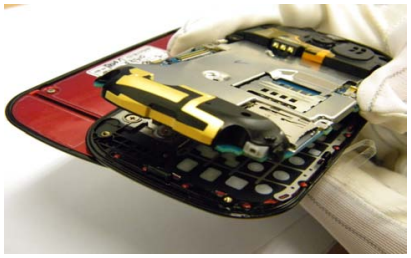
11. Disassembly and Assembly Instructions

11-1. Disassembly

1 	2 1) Push the two points by using the pincette.
1) Unscrew the 6 points of the REAR. (TORQUE : 1.0~1.2)	1) Detach the REAR from slide ass`y .
3 	4  
1) Detach the two side key from the board. 2) Detach the FPCB connector by using the pincette.	1) Unscrew the 2 point from the board. (TORQUE : 1.0~1.2) 2) Detach the board from the front.

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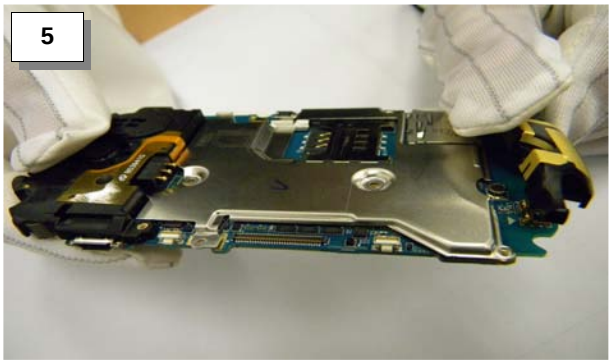
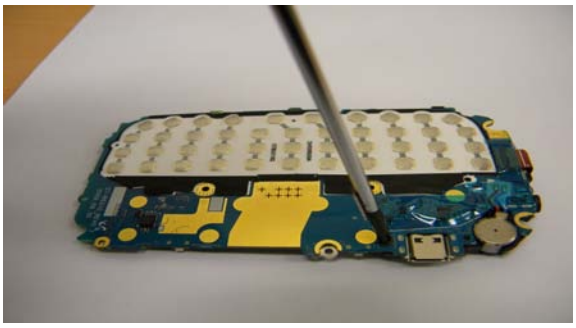
5

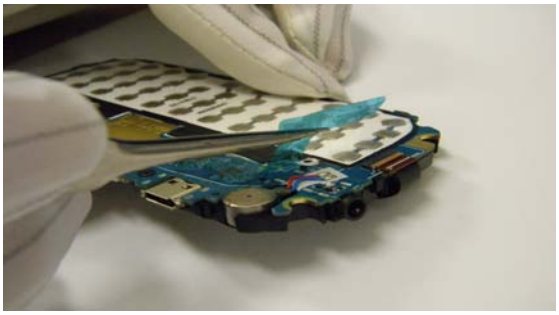


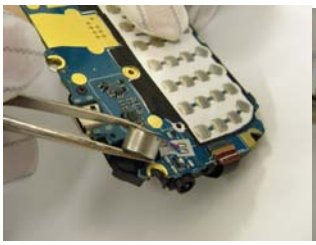
1) Be care of the break.

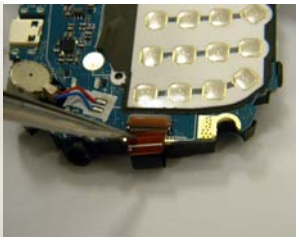


1) Detach the intenna module from the borad..
2) Unscrew the 1 point from the board.
(TORQUE : 1.0~1.2)

6

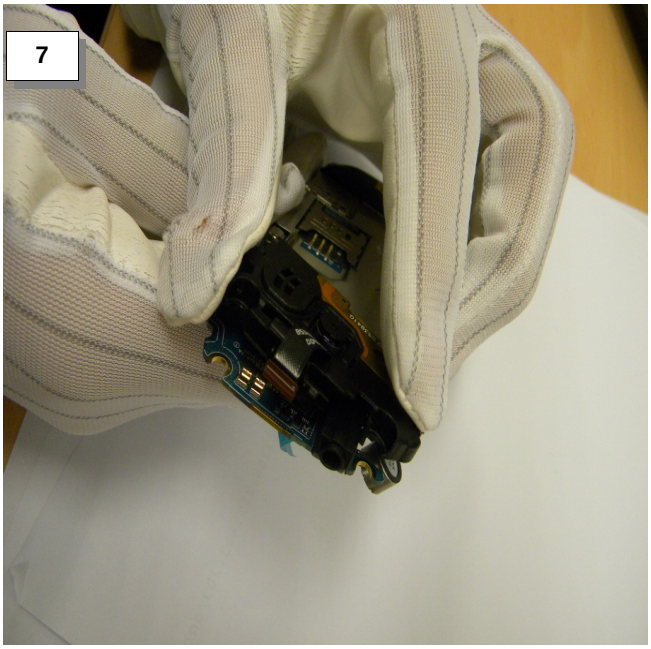






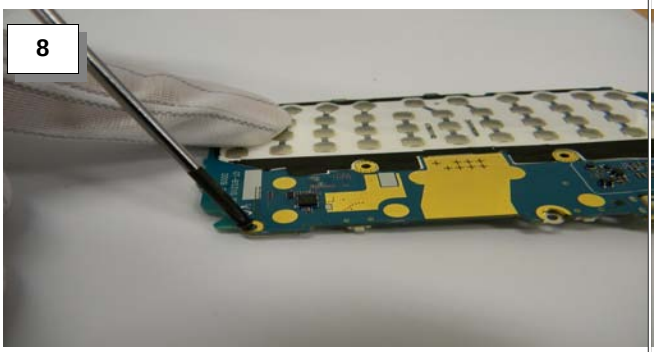
1) Detach the Tape
2) Detach the motor , connector by using the pincette.

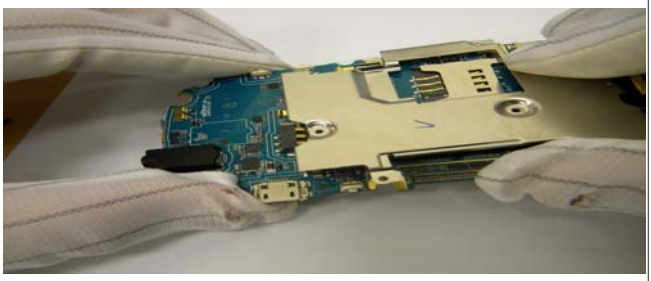
7



1) Detach the SPK module from the borad..

8





1) Unscrew the 1 points from the board.
(TORQUE : 1.0~1.2)
2) Detach the shieldcan from the borad..

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9 	10
1) Detach the FPCB connector by using the pincette. 2) Detach the KEY PAD from the front. 3) Unscrew the 6 point from the board. (TORQUE : 0.8~1.0)	1) Detach the front from the lower.
11 	12
1) Detach the screw cap from the lower. 2) Unscrew the 4 point from the lower. (TORQUE : 1.0~1.2)	1) Detach the lower from the upper.

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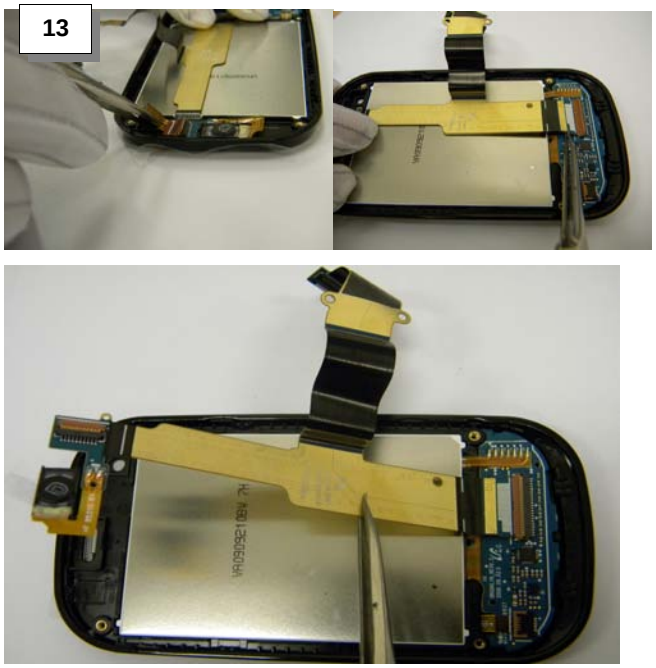
13 	14
1) Detach the camera , FPCB, SUB PBA by using the pincette.	1) Detach TAPE from the upper 2) the LCD from the upper. 3) Detach the navi from the upper.
15 	16 THE END
1) Detach the TSP from the upper.	

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11-2 Assembly

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 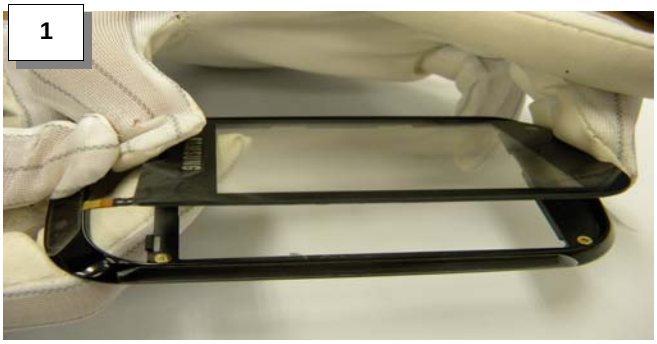
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 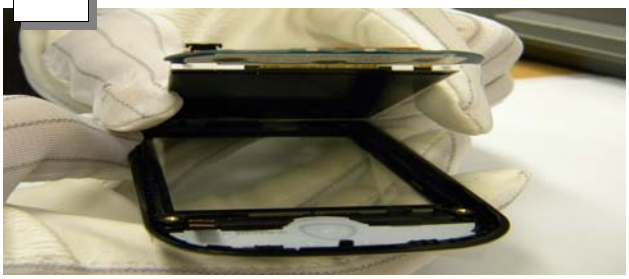
 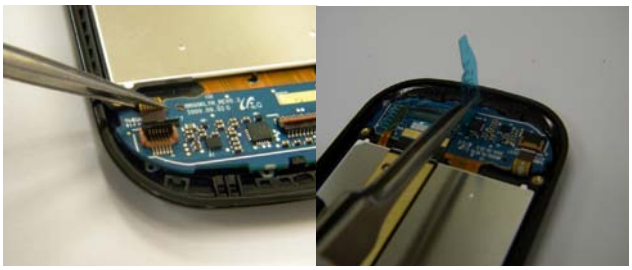 </td>
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<tr>
<td>1) Attach the TSP to the Upper.
2) Place navi on Upper.</td>
<td>1) Attach the LCD assy to the Upper.
2) Put in the TSP FPCB to the connector.
Be careful of FPCB demage.
3) Put TAPE on Upper,</td>
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 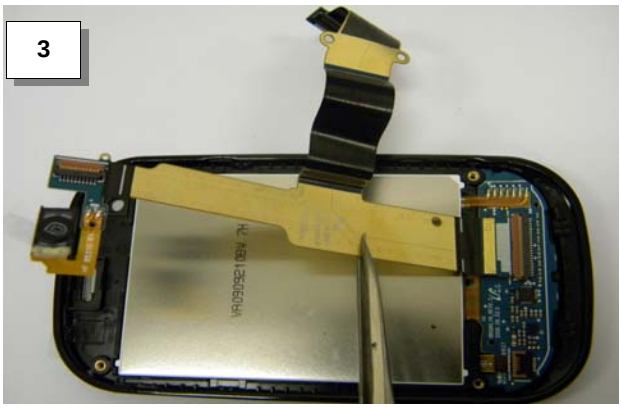
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<td>4
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<tr>
<td>1) Put in the camera , Receiver FPCB to each connector by using the pincette.</td>
<td>1) Assemble upper assy with lower.</td>
</tr>
</table>

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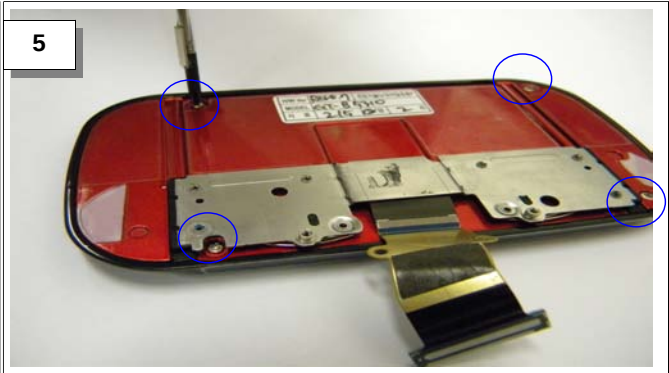
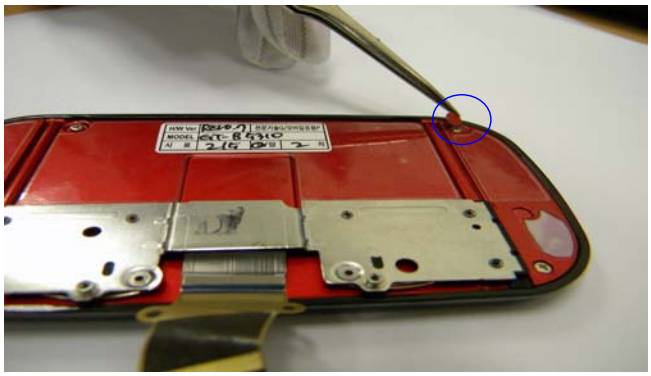
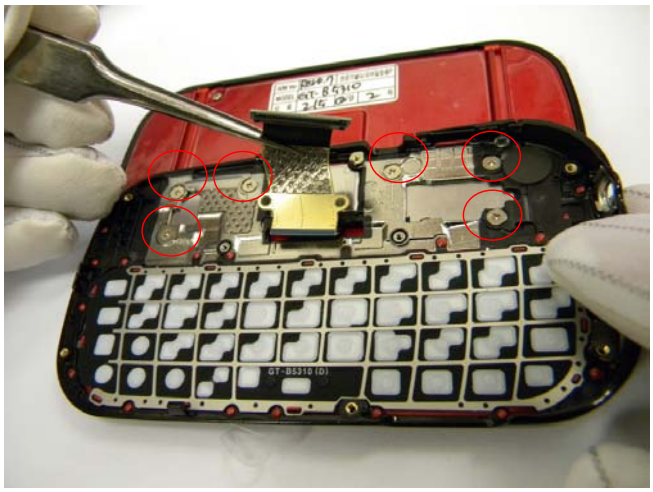
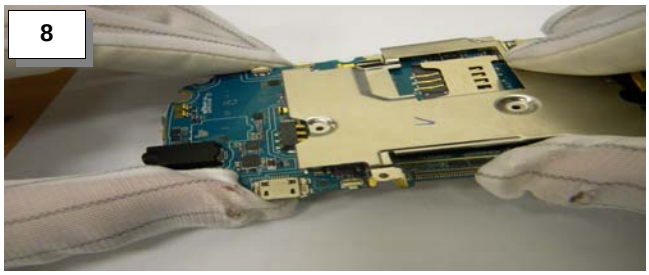
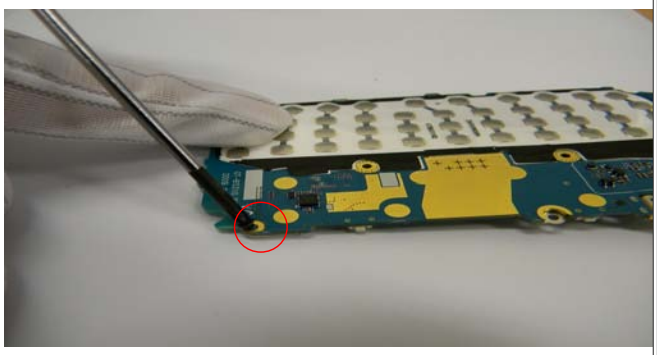
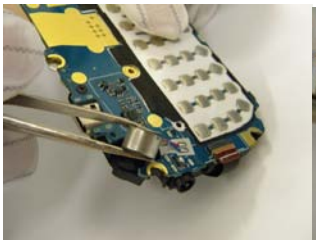
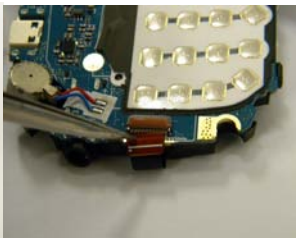
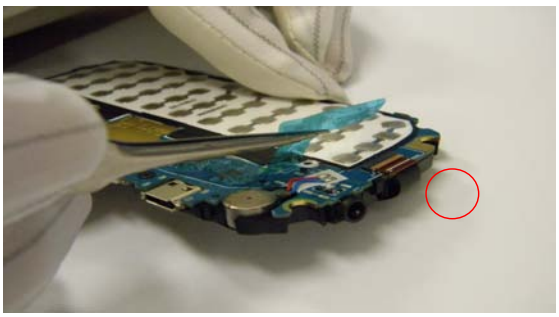
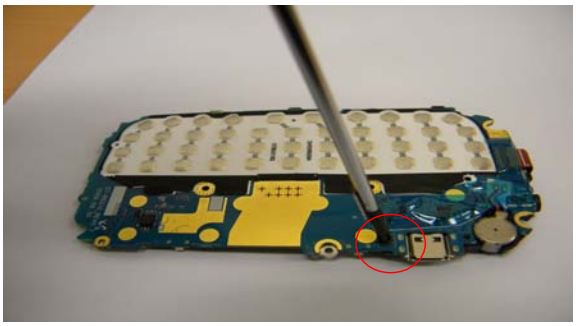
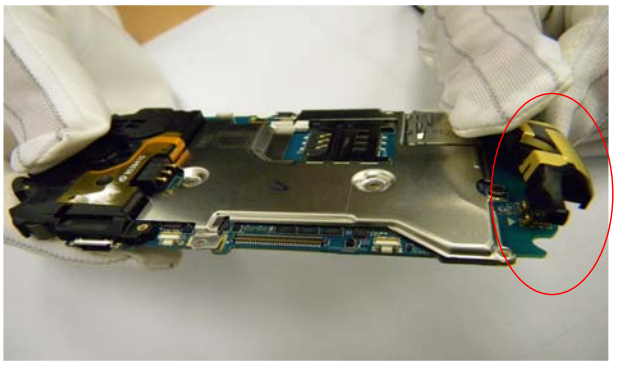
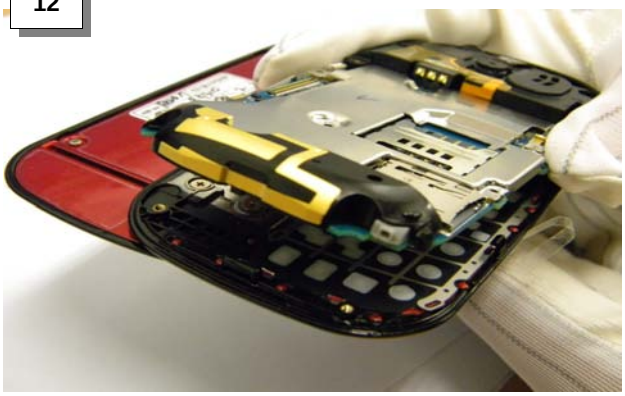
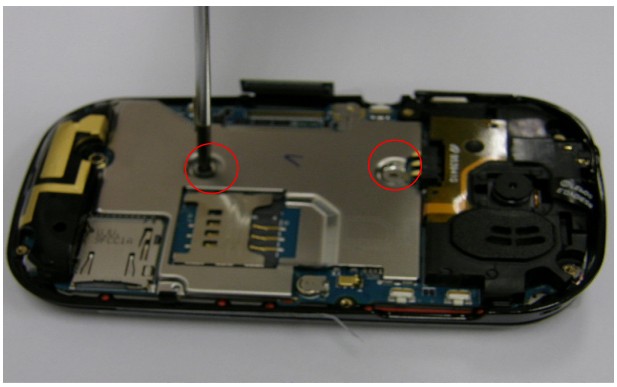
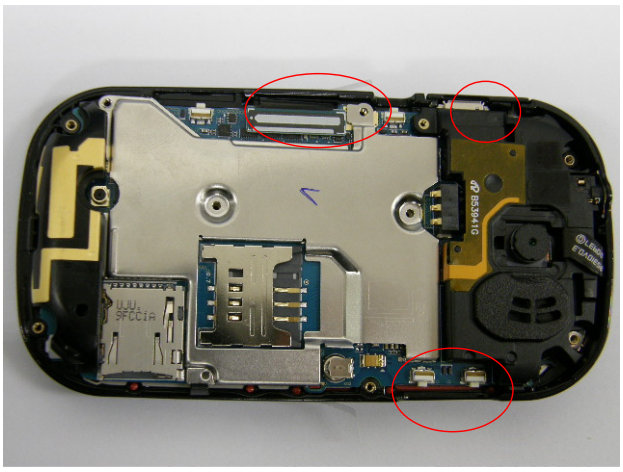
5  	6
1) Screw 4 points to the lower. (TORQUE : 1.0~1.2) 2) Attach the screw cap to the lower.	1) Assemble the front with the lower.
7 	8  
1) Attach the FPCB to the lower. 2) Screw 6 points to the front. (TORQUE : 0.8~1.0)	1) Attach the Shield Can to the hook of the board. 2) Screw 1 points to the board. (TORQUE : 1.0~1.2)

9 	**10**   
1) Attach the SPK module to the board.	1) Put in the motor, connector by using the pincette. 2)
11  	**12**  
1) Screw the 1 point to the board. (TORQUE : 1.0~1.2) 2) Attach the intenna to the board.	1) Assemble the board with the front. 2) Screw the 2 point to the board. (TORQUE : 1.0~1.2)

13 	**14**
1) Place the two side key to the board. 2) Press the FPCB connector.	1) Place Rear on front.
15 	**16** The END
1) Screw the 6 points of the REAR. (TORQUE : 1.0~1.2)	

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